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EMPLOYMENT-UNEMPLOYMENT

HEARINGS

BEFORE THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

ONE HUNDRED FIRST CONGRESS

SECOND SESSION

PART 39

OCTOBER 5, NOVEMBER 2, AND DECEMBER 7, 1990

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EMPLOYMENT-UNEMPLOYMENT

FRIDAY, OCTOBER 5, 1990

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The committee met, pursuant to notice, at 9:30 a.m., in room 2359, Rayburn House Office Building, Hon. Lee H. Hamilton (chairman of the committee) presiding.

Present: Representatives Hamilton and Solarz.

Also present: William Buechner, professional staff member.

OPENING STATEMENT OF REPRESENTATIVE HAMILTON, CHAIRMAN

Representative HAMILTON. The Joint Economic Committee will come to order. We meet to examine the employment and unemployment situation for September.

Our witness is the Honorable Janet Norwood, Commissioner of the Bureau of Labor Statistics. The economic data of recent weeks suggest that the economy is beginning to turn down. The leading indicators are down 1.2 percent for August. Industrial production is down 0.2 of a percent. Retail sales are down. New orders for durable goods are down. Housing starts are down. Real personal income was down, and the list goes on.

At the same time, the inflation rate was up. The consumer price index rose at an annual rate of 7 percent in the last 3 months compared to 4.8 percent for all of 1989.

We are pleased to have Commissioner Norwood with us this morning. We hope her testimony today can shed some light on these growing problems.

The Joint Economic Committee will now ask you, Commissioner, to present your testimony on the employment and unemployment situation in September.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS; AND THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS

Mrs. NORWOOD. Thank you very much, Mr. Chairman. It's a pleasure for us to be here and as always I have with me Mr. Dalton and Mr. Plewes.

The Nation's job market continued to slow down in September. Payroll employment declined slightly, and the civilian worker unemployment rate, at 5.7 percent, was 0.4 of a percentage point higher than the rate that generally prevailed through 1989 and the first half of 1990.

Payroll employment has progressively worsened in each of the last 3 months. Since June's gain of about 225,000 jobs, the over-the-month employment changes have been 85,000, 45,000, and now, for September, a decline of 60,000. These figures all include the effects of the Census Bureau's cut backs of temporary workers during that period. Employment declines continued in manufacturing and construction, and growth in most of the service-producing industries has either slowed dramatically or halted all together.

In September, for the second month in a row, more industries lost jobs than gained them, and the diffusion index, at 44 percent, is now at its lowest level since December 1982.

The Nation's factories lost 65,000 jobs in September, the second-largest monthly loss since factory employment began decreasing in early 1989; the reductions now total more than half a million jobs. Among durable goods industries, where the bulk of the losses have occurred, declines were widespread in September, with the largest in transportation equipment, electronic equipment, and industrial machinery. Smaller losses occurred in fabricated metals, furniture, and stone, clay, and glass products. All the major industry groups within durables have lost jobs over the past year or two, with those losses generally representing from 3 to 6 percent of their employment. Motor vehicles has been hit even more, having lost 10 percent of its jobs. Among nondurable goods industries, textiles and apparel have experienced large losses during this period.

Construction employment fell for the fourth month in a row, with a September decline of 20,000. Mining was little changed over the month; we have not yet seen much change in employment levels in oil and gas extraction since the Middle East crisis began.

Within the service-producing sector, retail trade employment had been slowing for most of the year and now seems to be edging downward. The services industry itself, which employs 1 in 4 nonfarm workers, is also experiencing a notable slackening. September's gain of only 20,000 jobs is one of the smallest since the 1981–82 recession. Employment in health services increased as usual, rising by 45,000, while business services was down 15,000. Since June, employment in business services has decreased by 25,000.

A fall of 35,000 in government employment in September reflects a drop of some 40,000 census workers from Federal payrolls and 20,000 workers in State governments, which were partly offset by gains at the local level, particularly in education. Some 15,000 jobs were added in the transportation industry, in part because of a jump in the number of school bus drivers necessary to cope with rising school enrollments.

The household survey showed little change in employment and an unemployment rate not much different from the preceding month. The jobless rate for adult men and women—at 5.1 and 5 percent, respectively, in September—have been creeping up slowly for several months. The unemployment rate for Hispanics increased. The number of unemployed job losers rose for the second month in a row, and the number of persons working part time for economic reasons has also risen substantially. There was no significant movement among discouraged workers, whose number totaled 835,000 during the third quarter of the year.

In summary, Mr. Chairman, the employment situation deteriorated in September, as further job losses occurred in the Nation's factories, and employment in the service-producing sector failed to improve. Few areas of the economy are escaping the downward tug of the current economic slowdown.

We will be happy now to answer any questions you may have.

[The table attached to Mrs. Norwood's statement, together with the Employment Situation press release, follows:]

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unadjusted rate	X-11 ARIMA method							X-11 method (official method before 1980)	Range (cols. 2-9)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual	12-month extrapolation		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1989										
September...	5.1	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
October.....	5.0	5.3	5.3	5.2	5.3	5.3	5.3	5.3	5.3	.1
November....	5.2	5.3	5.3	5.3	5.4	5.4	5.4	5.3	5.4	.1
December....	5.1	5.3	5.3	5.3	5.3	5.4	5.4	5.3	5.4	.1
1990										
January.....	5.9	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
February....	5.8	5.3	5.3	5.3	5.3	5.3	5.2	5.3	5.3	.1
March.......	5.4	5.2	5.2	5.3	5.2	5.2	5.1	5.2	5.2	.2
April.......	5.2	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	-
May.........	5.1	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.2	.1
June........	5.3	5.2	5.2	5.2	5.1	5.2	5.2	5.2	5.1	.1
July........	5.5	5.5	5.4	5.4	5.4	5.4	5.5	5.5	5.5	.1
August......	5.4	5.6	5.6	5.6	5.6	5.6	5.5	5.6	5.6	.1
September...	5.5	5.7	5.6	5.6	5.7	5.7	5.6	5.7	5.7	.1

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
October 1990

(1) *Unadjusted rate*. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) *Official procedure (X-11 ARIMA method)*. The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components—agricultural employment, nonagricultural employment and unemployment—for 4 age-sex groups—males and females, ages 16-19 and 20 years and over—are seasonally adjusted independently using data from January 1974 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of *Employment and Earnings*.

(3) *Concurrent (as first computed, X-11 ARIMA method)*. The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1984 would be based, during 1984, on the adjustment of data from the period January 1974 through January 1984.

(4) *Concurrent (revised, X-11 ARIMA method)*. The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) *Stable (X-11 ARIMA method)*. Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) *Total (X-11 ARIMA method)*. This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) *Residual (X-11 ARIMA method)*. This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) *12-month extrapolation (X-11 ARIMA method)*. This approach is the same as the official procedure except that the factors are extrapolated in 12-month intervals. The factors for January-December of the current year are computed at the beginning of the year based on data through the preceding year. The values for January through June of the current year are the same as the official values since they reflect the same factors.

(9) *X-11 methou (official method before 1980)*. The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in *The X-11 ARIMA Seasonal Adjustment Method*, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in *X-11 Variant of the Census Method II Seasonal Adjustment Program*, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

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THE EMPLOYMENT SITUATION: SEPTEMBER 1990

Employment continued to show weakness in September, and unemployment was essentially unchanged, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The civilian worker unemployment rate was 5.7 percent, about half a percentage point higher than it had been earlier in the year.

Nonfarm payroll employment, as measured by the survey of business establishments, edged down by 100,000 in September, reflecting the further curtailment of decennial census work and weakness in most industries. Total civilian employment, as measured by the survey of households, rose slightly on a seasonally adjusted basis, after declining substantially in the prior 2 months.

Unemployment (Household Survey Data)

The civilian worker unemployment rate was 5.7 percent in September, not substantially different from the previous month but nearly half a percentage point higher than the rates which had prevailed from the fall of 1988 to mid-1990. Unemployment rates for most major worker groups--adult men (5.1 percent), adult women (5.0 percent), whites (4.8 percent), and blacks (12.1 percent)--changed little over the month. The rate for Hispanics, however, rose to 8.7 percent, while that for teenagers fell slightly to 15.5 percent. (See tables A-2 and A-3.)

At 7.1 million, seasonally adjusted, the number of unemployed persons also was little changed over the month. There was an increase of about 150,000 in the number of unemployed on temporary layoff, but there was little change in the other unemployment categories--persons who had been permanently separated, job leavers, and labor force entrants. The number of persons working part time for economic reasons (often referred to as the partially unemployed) rose by 330,000 in September to 5.4 million. (See tables A-2, A-4, and A-8.)

Civilian Employment and the Labor Force (Household Survey Data)

Total civilian employment, at 117.9 million, seasonally adjusted, rose a bit in September, after declining by 700,000 in the prior 2 months. The proportion of the working-age population that is employed (the employment-population ratio) was 62.6 percent in September, little different from the July and August figures. While there was a seasonally adjusted rise in the

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages 1990 II	 III	Monthly data 1990 July	 Aug.	 Sept.	Aug.-Sept. change
HOUSEHOLD DATA	Thousands of persons					
Labor force 1/........	126,550	126,421	126,394	126,300	126,568	268
Total employment 1/..	119,927	119,459	119,580	119,298	119,499	201
Civilian labor force..	124,908	124,798	124,767	124,660	124,967	307
Civilian employment..	118,285	117,836	117,953	117,658	117,898	240
Unemployment........	6,623	6,962	6,814	7,003	7,069	66
Not in labor force....	62,916	63,468	63,369	63,601	63,434	-167
Discouraged workers..	893	835	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/......	5.2	5.5	5.4	5.5	5.6	0.1
All civilian workers	5.3	5.6	5.5	5.6	5.7	.1
Adult men.........	4.8	5.0	4.9	5.0	5.1	.1
Adult women.......	4.6	4.8	4.7	4.9	5.0	.1
Teenagers.........	14.8	16.2	16.3	16.7	15.5	-1.2
White.............	4.6	4.8	4.6	4.8	4.8	.0
Black.............	10.4	11.7	11.3	11.8	12.1	.3
Hispanic origin....	7.6	8.1	7.9	7.8	8.7	.9
ESTABLISHMENT DATA	Thousands of jobs					
Nonfarm employment....	110,541	p110,651	110,740	p110,657	p110,556	p-101
Goods-producing.....	25,178	p25,016	25,105	p25,013	p24,929	p-84
Service-producing....	85,363	p85,635	85,635	p85,644	p85,627	p-17
	Hours of work					
Average weekly hours:						
Total private.......	34.6	p34.6	34.5	p34.5	p34.7	p0.2
Manufacturing.......	40.9	p41.0	40.9	p41.0	p41.0	p.0
Overtime..........	3.7	p3.7	3.7	p3.8	p3.7	p-.1

1 Includes the resident Armed Forces. p=preliminary.
N.A.=not available.

number of working teens in September that offset somewhat the declines occurring during the summer months, these movements seem to reflect an unusual teenage employment pattern this summer. Substantially fewer teens than usual found jobs this summer; consequently, fewer than usual left the workforce when school resumed. (See table A-2.)

The total number of persons in the civilian labor force (125.0 million) and the labor force participation rate (66.3 percent) were little changed over the month, after seasonal adjustment. The labor force was up by 950,000 from a year earlier. (See table A-2.)

Discouraged Workers (Household Survey Data)

The number of discouraged workers--persons who report they want to work but have not looked for jobs because they believed that none was available--totaled 835,000 in the third quarter of 1990, after seasonal adjustment, essentially unchanged from the previous quarter. (See table A-14.)

Industry Payroll Employment (Establishment Survey Data)

Payroll employment exhibited further weakness in September. Job losses continued among goods-producing industries, and the service-producing sector showed virtually no net job growth. At a level of 110.6 million, total nonfarm employment was down by 100,000 over the month. About 40,000 of this decline, however, was among temporary census workers. (See table B-1.)

The number of factory jobs fell by 65,000 in September, after seasonal adjustment. Manufacturing has lost 520,000 jobs since its peak in January 1989, with 115,000 of that occurring in just the last 2 months. Durable goods industries continued to account for most of the declines, as transportation equipment, electronic equipment, and industrial machinery each lost nearly 15,000 jobs in September. Smaller but still significant losses occurred in fabricated metals, furniture, and stone, clay, and glass products.

Elsewhere in the goods-producing sector, construction employment fell by 20,000 in September, after seasonal adjustment, as job losses in the last 4 months have totaled over 100,000. In mining and its oil and gas extraction component, employment was about unchanged over the month.

Within the service-producing sector, only a few industries provided evidence of employment growth in September. Health services added 45,000 jobs over the month and has accounted for nearly two-fifths of total job growth thus far this year. Local government employment grew by 25,000 in September and has increased by 325,000 over the past year; much of the September increase was in local education, reflecting growth in school enrollments. Transportation employment rose by 15,000 over the month, partially due to increased hiring by school bus companies.

Among the industries losing jobs, business services declined by 15,000 over the month. The finance, insurance, and real estate industry experienced a further small decline; its real estate component has slipped by 15,000 since May. Employment in retail trade edged down for the second consecutive month; general merchandise stores have led the dropoff in this industry, having lost 70,000 jobs since May 1989. Total government employment fell by 35,000 in September, as the gain in local government hiring was more than offset by declines at the state and federal levels (the latter due to continued cutbacks in the number of decennial census workers).

Weekly Hours (Establishment Survey Data)

The average workweek for production or nonsupervisory workers on private nonfarm payrolls rose by 0.2 hour in September to 34.7 hours, seasonally adjusted. The factory workweek was unchanged at 41.0 hours, while factory overtime edged down by 0.1 hour to 3.7 hours. (See table B-2.)

The index of aggregate weekly hours of production or nonsupervisory workers on private nonfarm payrolls, at 124.7 (1982=100), edged up by 0.2 percent in September. By contrast, the index for manufacturing fell 0.5 percent, to 106.6. This index was down 2.2 percent over the past year, reflecting the cutbacks in manufacturing employment.

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings of private production or nonsupervisory workers rose 0.5 percent in September on a seasonally adjusted basis. Prior to seasonal adjustment, average hourly earnings increased by 17 cents to $10.17, and average weekly earnings rose by $5.92 to $353.92. Over the year, average hourly earnings increased by 4.1 percent and average weekly earnings by 4.4 percent. (See tables B-3 and B-4.)

The Employment Situation for October 1990 will be released on Friday, November 2, at 8:30 A.M. (EST).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 60,000 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonfarm payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes over 340,000 establishments employing over 40 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonfarm firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. For the establishment survey, updated factors for seasonal adjustment are also calculated twice a year. In both surveys, revisions to historical data are made once a year.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 358,000; for total unemployment it is 224,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .25 percentage point; for teenagers, it is 1.29 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $8.50 per issue or $25.00 per year from the U.S. Government Printing Office, Washington, D.C., 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

HOUSEHOLD DATA

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	Sept. 1989	Aug. 1990	Sept. 1990	Sept. 1989	May 1990	June 1990	July 1990	Aug. 1990	Sept. 1990
TOTAL									
Noninstitutional population[1]	188,428	189,901	190,002	188,428	189,467	189,607	189,763	189,901	190,002
Labor force[2]	125,530	127,652	126,380	125,725	126,643	126,466	126,394	126,300	126,568
Participation rate[3]	66.6	67.2	66.5	66.7	66.8	66.7	66.6	66.5	66.6
Total employed[2]	119,200	120,814	119,562	119,121	119,990	120,019	119,580	119,298	119,499
Employment-population ratio[4]	63.3	63.6	62.9	63.2	63.3	63.3	63.0	62.8	62.9
Resident Armed Forces	1,702	1,640	1,601	1,702	1,639	1,630	1,627	1,640	1,601
Civilian employed	117,498	119,174	117,961	117,419	118,351	118,389	117,953	117,658	117,898
Agriculture	3,329	3,473	3,289	3,219	3,306	3,348	3,086	3,137	3,181
Nonagricultural industries	114,169	115,702	114,672	114,200	115,046	115,041	114,867	114,521	114,717
Unemployed	6,330	6,837	6,818	6,604	6,653	6,447	6,814	7,003	7,069
Unemployment rate[5]	5.0	5.4	5.4	5.3	5.3	5.1	5.4	5.5	5.6
Not in labor force	62,898	62,250	63,622	62,703	62,824	63,141	63,369	63,601	63,434
Men, 16 years and over									
Noninstitutional population[1]	90,456	91,240	91,271	90,456	91,014	91,087	91,168	91,240	91,271
Labor force[2]	69,123	70,600	69,569	69,360	69,737	69,599	69,544	69,458	69,810
Participation rate[3]	76.4	77.4	76.2	76.7	76.6	76.4	76.3	76.1	76.5
Total employed[2]	65,875	67,079	66,053	65,681	66,059	66,000	65,740	65,596	65,867
Employment-population ratio[4]	72.8	73.5	72.4	72.6	72.6	72.5	72.1	71.9	72.2
Resident Armed Forces	1,531	1,475	1,441	1,531	1,472	1,465	1,462	1,475	1,441
Civilian employed	64,344	65,604	64,612	64,150	64,587	64,535	64,278	64,121	64,426
Unemployed	3,248	3,521	3,516	3,679	3,678	3,599	3,804	3,863	3,943
Unemployment rate[5]	4.7	5.0	5.1	5.3	5.3	5.2	5.5	5.6	5.6
Women, 16 years and over									
Noninstitutional population[1]	97,972	98,661	98,731	97,972	98,453	98,520	98,595	98,661	98,731
Labor force[2]	56,407	57,052	56,811	56,365	56,906	56,867	56,849	56,842	56,758
Participation rate[3]	57.6	57.8	57.5	57.5	57.8	57.7	57.7	57.6	57.5
Total employed[2]	53,325	53,736	53,510	53,440	53,931	54,019	53,839	53,702	53,632
Employment-population ratio[4]	54.4	54.5	54.2	54.5	54.8	54.8	54.6	54.4	54.3
Resident Armed Forces	171	165	160	171	167	165	165	165	160
Civilian employed	53,154	53,570	53,350	53,269	53,764	53,854	53,674	53,537	53,472
Unemployed	3,081	3,316	3,302	2,925	2,975	2,848	3,010	3,140	3,126
Unemployment rate[5]	5.5	5.8	5.8	5.2	5.2	5.0	5.3	5.5	5.5

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[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted[1]					
	Sept. 1989	Aug. 1990	Sept. 1990	Sept. 1989	May 1990	June 1990	July 1990	Aug. 1990	Sept. 1990
TOTAL									
Civilian noninstitutional population	186,725	188,261	188,401	186,725	187,828	187,977	188,136	188,261	188,401
Civilian labor force	123,828	126,012	124,779	124,023	125,004	124,836	124,767	124,660	124,967
Participation rate	66.3	66.9	66.2	66.4	66.6	66.4	66.3	66.2	66.3
Employed	117,498	119,174	117,961	117,419	118,350	118,389	117,953	117,657	117,898
Employment-population ratio[2]	62.9	63.3	62.6	62.9	63.0	63.0	62.7	62.5	62.6
Unemployed	6,330	6,837	6,818	6,604	6,653	6,447	6,814	7,003	7,069
Unemployment rate	5.1	5.4	5.5	5.3	5.3	5.2	5.5	5.6	5.7
Men, 20 years and over									
Civilian noninstitutional population	81,790	82,862	82,940	81,790	82,581	82,676	82,790	82,862	82,940
Civilian labor force	63,771	64,773	64,576	63,771	64,312	64,364	64,344	64,362	64,573
Participation rate	78.0	78.2	77.9	78.0	77.9	77.9	77.7	77.7	77.9
Employed	61,113	61,862	61,651	60,729	61,265	61,345	61,196	61,143	61,264
Employment-population ratio[2]	74.7	74.7	74.3	74.2	74.2	74.2	73.9	73.8	73.9
Agriculture	2,419	2,435	2,387	2,330	2,388	2,400	2,262	2,246	2,295
Nonagricultural industries	58,694	59,427	59,264	58,399	58,877	58,945	58,934	58,897	58,969
Unemployed	2,658	2,910	2,925	3,042	3,047	3,019	3,148	3,219	3,309
Unemployment rate	4.2	4.5	4.5	4.8	4.7	4.7	4.9	5.0	5.1
Women, 20 years and over									
Civilian noninstitutional population	90,771	91,688	91,765	90,771	91,414	91,495	91,581	91,688	91,765
Civilian labor force	52,558	52,974	53,322	52,358	53,146	53,174	53,211	53,315	53,121
Participation rate	57.9	57.8	58.1	57.7	58.1	58.1	58.1	58.1	57.9
Employed	50,040	50,183	50,531	49,984	50,708	50,776	50,719	50,699	50,489
Employment-population ratio[2]	55.1	54.7	55.1	55.1	55.5	55.5	55.4	55.3	55.0
Agriculture	701	674	661	660	680	700	585	639	619
Nonagricultural industries	49,339	49,509	49,870	49,324	50,028	50,077	50,135	50,060	49,870
Unemployed	2,518	2,791	2,790	2,374	2,438	2,398	2,492	2,616	2,632
Unemployment rate	4.8	5.3	5.2	4.5	4.6	4.5	4.7	4.9	5.0
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,166	13,711	13,696	14,166	13,832	13,806	13,764	13,711	13,696
Civilian labor force	7,498	8,265	6,882	7,894	7,545	7,298	7,212	6,983	7,272
Participation rate	52.9	60.3	50.2	55.7	54.6	52.9	52.4	50.9	53.1
Employed	6,345	7,129	5,779	6,706	6,376	6,268	6,038	5,815	6,144
Employment-population ratio[2]	44.8	52.0	42.2	47.3	46.1	45.4	43.9	42.4	44.9
Agriculture	209	364	242	229	237	249	239	251	266
Nonagricultural industries	6,136	6,765	5,537	6,477	6,139	6,019	5,799	5,564	5,878
Unemployed	1,153	1,136	1,103	1,188	1,169	1,030	1,174	1,168	1,128
Unemployment rate	15.4	13.7	16.0	15.0	15.5	14.1	16.3	16.7	15.5

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[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-2. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Sept. 1989	Aug. 1990	Sept. 1990	Sept. 1989	May 1990	June 1990	July 1990	Aug. 1990	Sept. 1990
WHITE									
Civilian noninstitutional population	159,549	160,550	160,640	159,549	160,271	160,386	160,468	160,550	160,640
Civilian labor force	106,195	108,238	107,261	106,393	107,353	107,273	107,230	107,136	107,451
Participation rate	66.6	67.4	66.8	66.7	67.0	66.9	66.8	66.7	66.9
Employed	101,600	103,217	102,277	101,579	102,362	102,461	102,360	101,969	102,261
Employment-population ratio[2]	63.7	64.3	63.7	63.7	63.9	63.9	63.7	63.5	63.7
Unemployed	4,595	5,022	4,984	4,814	4,991	4,812	4,870	5,167	5,190
Unemployment rate	4.3	4.6	4.6	4.5	4.6	4.5	4.5	4.8	4.8
Men, 20 years and over									
Civilian labor force	55,433	56,322	56,115	55,465	55,919	56,032	55,897	56,036	56,144
Participation rate	78.3	78.7	78.3	78.3	78.3	78.3	78.1	78.3	78.4
Employed	53,416	54,149	53,990	53,153	53,578	53,680	53,579	53,613	53,721
Employment-population ratio[2]	75.5	75.6	75.4	75.1	75.1	75.1	74.9	74.9	75.0
Unemployed	2,017	2,173	2,125	2,312	2,341	2,352	2,318	2,423	2,423
Unemployment rate	3.6	3.9	3.8	4.2	4.2	4.1	4.1	4.3	4.3
Women, 20 years and over									
Civilian labor force	44,358	44,817	45,166	44,198	44,925	45,056	45,120	45,100	45,000
Participation rate	57.4	57.5	57.9	57.2	57.8	57.9	57.9	57.9	57.7
Employed	42,570	42,795	43,155	42,520	43,165	43,292	43,321	43,227	43,112
Employment-population ratio[2]	55.1	54.9	55.3	55.0	55.5	55.6	55.6	55.5	55.3
Unemployed	1,788	2,023	2,011	1,678	1,760	1,763	1,799	1,873	1,888
Unemployment rate	4.0	4.5	4.5	3.8	3.9	3.9	4.0	4.2	4.2
Both sexes, 16 to 19 years									
Civilian labor force	6,405	7,099	5,979	6,730	6,506	6,399	6,216	5,999	6,306
Participation rate	55.9	64.3	54.3	58.7	58.4	56.6	56.1	54.3	57.3
Employed	5,614	6,273	5,132	5,906	5,616	5,610	5,363	5,128	5,427
Employment-population ratio[2]	49.0	56.8	46.6	51.5	50.4	49.7	48.4	46.4	49.3
Unemployed	790	826	847	824	890	787	853	871	879
Unemployment rate	12.3	11.6	14.2	12.2	13.7	12.2	13.7	14.5	13.9
Men	12.9	12.1	15.0	13.3	14.2	12.9	15.1	15.7	15.3
Women	11.7	11.1	13.3	11.1	13.1	11.4	12.3	13.2	12.5
BLACK									
Civilian noninstitutional population	21,085	21,337	21,361	21,085	21,261	21,289	21,318	21,337	21,361
Civilian labor force	13,481	13,584	13,425	13,518	13,587	13,472	13,379	13,366	13,470
Participation rate	63.9	63.7	62.8	64.1	63.9	63.3	62.8	62.6	63.1
Employed	11,956	12,027	11,855	11,938	12,179	12,064	11,870	11,791	11,839
Employment-population ratio[2]	56.7	56.4	55.5	56.6	57.3	56.7	55.7	55.3	55.4
Unemployed	1,524	1,557	1,569	1,580	1,408	1,407	1,510	1,575	1,631
Unemployment rate	11.3	11.5	11.7	11.7	10.4	10.4	11.3	11.8	12.1
Men, 20 years and over									
Civilian labor force	6,246	6,302	6,332	6,239	6,241	6,293	6,293	6,235	6,330
Participation rate	74.6	73.9	74.1	74.6	73.5	74.0	73.9	73.1	74.1
Employed	5,662	5,678	5,658	5,610	5,672	5,702	5,617	5,572	5,580
Employment-population ratio[2]	67.9	66.6	66.3	67.0	66.8	67.1	65.9	65.4	65.3
Unemployed	584	624	674	629	569	591	676	663	750
Unemployment rate	9.0	9.9	10.6	10.1	9.1	9.4	10.7	10.6	11.8
Women, 20 years and over									
Civilian labor force	6,369	6,331	6,362	6,360	6,516	6,377	6,328	6,358	6,361
Participation rate	60.6	59.3	59.5	60.5	61.3	59.9	59.4	59.6	59.5
Employed	5,731	5,684	5,682	5,743	5,921	5,812	5,736	5,730	5,705
Employment-population ratio[2]	54.5	53.3	53.2	54.6	55.7	54.6	53.8	53.7	53.4
Unemployed	639	648	680	617	595	565	592	628	656
Unemployment rate	10.0	10.2	10.7	9.7	9.1	8.9	9.4	9.9	10.3
Both sexes, 16 to 19 years									
Civilian labor force	865	951	731	919	830	802	758	773	779
Participation rate	39.4	44.4	34.2	41.8	38.6	37.4	35.4	36.1	36.5
Employed	544	664	515	585	586	550	517	489	554
Employment-population ratio[2]	24.7	31.0	24.1	26.6	27.3	25.6	24.1	22.8	25.9
Unemployed	322	287	215	334	244	252	241	284	225
Unemployment rate	37.2	30.2	29.5	36.3	29.4	31.4	31.8	36.7	28.9
Men	34.4	30.0	30.5	33.8	31.1	37.4	32.3	38.4	30.6
Women	39.6	30.3	28.4	38.8	27.6	25.3	31.2	35.0	26.9

See footnotes at end of table.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin—Continued

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Sept. 1989	Aug. 1990	Sept. 1990	Sept. 1989	May 1990	June 1990	July 1990	Aug. 1990	Sept. 1990
HISPANIC ORIGIN									
Civilian noninstitutional population	13,894	14,356	14,396	13,894	14,238	14,277	14,317	14,356	14,396
Civilian labor force	9,332	9,841	9,629	9,342	9,669	9,651	9,665	9,707	9,643
Participation rate	67.2	68.5	66.9	67.2	67.9	67.6	67.5	67.6	67.0
Employed	8,610	9,067	8,852	8,564	8,927	8,967	8,899	8,951	8,808
Employment-population ratio[2]	62.0	63.2	61.5	61.6	62.7	62.8	62.2	62.3	61.2
Unemployed	722	774	777	778	742	684	767	757	835
Unemployment rate	7.7	7.9	8.1	8.3	7.7	7.1	7.9	7.8	8.7

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

(In thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	Sept. 1989	Aug. 1990	Sept. 1990	Sept. 1989	May 1990	June 1990	July 1990	Aug. 1990	Sept. 1990
CHARACTERISTIC									
Civilian employed, 16 years and over	117,498	119,174	117,961	117,419	118,350	118,389	117,953	117,658	117,898
Married men, spouse present	40,856	40,726	41,083	40,649	40,881	40,554	40,545	40,604	40,919
Married women, spouse present	29,608	29,290	29,869	29,506	30,046	29,856	29,909	29,949	29,780
Women who maintain families	6,379	6,301	6,350	6,429	6,400	6,467	6,380	6,385	6,382
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture									
Wage and salary workers	1,686	1,904	1,822	1,680	1,728	1,685	1,628	1,686	1,808
Self-employed workers	1,523	1,441	1,364	1,424	1,502	1,507	1,377	1,357	1,275
Unpaid family workers	120	128	103	132	101	108	96	93	112
Nonagricultural industries									
Wage and salary workers	105,287	106,679	105,612	105,476	106,176	105,985	105,885	105,691	105,800
Government	17,513	17,164	17,467	17,613	18,113	17,863	17,788	17,842	17,555
Private industries	87,775	89,515	88,146	87,863	88,063	88,121	88,097	87,849	88,246
Private households	1,011	1,105	1,026	1,065	941	1,056	989	1,033	1,074
Other industries	86,764	88,410	87,120	86,798	87,122	87,065	87,108	86,816	87,171
Self-employed workers	8,586	8,793	8,810	8,581	8,783	8,759	8,709	8,629	8,810
Unpaid family workers	296	229	250	279	254	226	269	229	235
PERSONS AT WORK PART TIME[1]									
All industries									
Part time for economic reasons	4,487	5,368	4,941	4,864	4,831	5,013	4,870	5,036	5,385
Slack work	2,097	2,382	2,386	2,321	2,439	2,499	2,565	2,424	2,654
Could only find part-time work	1,991	2,382	2,245	2,161	2,052	2,224	2,070	2,123	2,462
Voluntary part time	15,666	12,332	15,482	15,506	15,592	15,125	15,311	15,377	15,283
Nonagricultural industries									
Part time for economic reasons	4,229	5,072	4,660	4,605	4,666	4,734	4,710	4,780	5,093
Slack work	1,835	2,195	2,203	2,165	2,317	2,284	2,408	2,242	2,481
Could only find part-time work	1,910	2,293	2,157	2,095	2,004	2,141	2,048	2,069	2,386
Voluntary part time	15,215	11,880	15,036	15,076	15,064	14,627	14,922	14,899	14,858

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1989		1990			1990		
	III	IV	I	II	III	July	Aug.	Sept.
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.1	1.1	1.1	1.1	1.3	1.2	1.3	1.3
U-2 Job losers as a percent of the civilian labor force	2.4	2.5	2.5	2.5	2.7	2.5	2.7	2.8
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force for persons 25 years and over	4.0	4.1	4.2	4.1	4.4	4.3	4.4	4.5
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	5.0	5.0	4.9	5.0	5.2	5.0	5.2	5.4
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	5.2	5.3	5.2	5.2	5.5	5.4	5.5	5.6
U-5b Total unemployed as a percent of the civilian labor force	5.3	5.3	5.2	5.3	5.6	5.5	5.6	5.7
U-6 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons as a percent of the civilian labor force less 1/2 of the part-time labor force	7.2	7.2	7.2	7.3	7.6	7.4	7.6	7.8
U-7 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less 1/2 of the part-time labor force	7.9	7.9	7.8	8.0	8.3	N.A.	N.A.	N.A.

N.A. = not available.

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Sept. 1989	Aug. 1990	Sept. 1990	Sept. 1989	May 1990	June 1990	July 1990	Aug. 1990	Sept. 1990
CHARACTERISTIC									
Total, 16 years and over	6,604	7,033	7,069	5.3	5.3	5.2	5.5	5.6	5.7
Men, 16 years and over	3,679	3,893	3,943	5.4	5.4	5.3	5.6	5.7	5.8
Men, 20 years and over	3,042	3,219	3,308	4.8	4.7	4.7	4.9	5.0	5.1
Women, 16 years and over	2,925	3,140	3,126	5.2	5.2	5.0	5.3	5.5	5.5
Women, 20 years and over	2,374	2,616	2,632	4.5	4.6	4.5	4.7	4.9	5.0
Both sexes, 16 to 19 years	1,188	1,198	1,129	15.0	15.5	14.1	16.3	16.7	15.5
Married men, spouse present	1,402	1,463	1,462	3.3	3.3	3.2	3.3	3.5	3.4
Married women, spouse present	1,165	1,205	1,231	3.8	3.5	3.7	3.5	3.9	4.0
Women who maintain families	537	591	629	7.7	7.4	8.0	8.5	8.6	8.9
Full-time workers	5,364	5,546	5,780	5.0	4.9	4.8	5.0	5.2	5.4
Part-time workers	1,232	1,458	1,289	7.3	7.4	7.6	8.1	7.9	7.1
Labor force time lost[2]	–	–	–	6.0	6.0	5.9	6.0	6.3	6.4
INDUSTRY									
Nonagricultural private wage and salary workers	5,025	5,327	5,480	5.4	5.5	5.3	5.5	5.7	5.8
Goods-producing industries	1,842	1,999	2,008	6.3	6.7	5.9	6.6	6.9	7.0
Mining	61	37	27	8.4	3.3	2.6	4.4	4.9	3.8
Construction	633	690	738	10.1	11.5	8.7	10.2	11.1	11.8
Manufacturing	1,148	1,273	1,244	5.2	5.4	4.9	5.7	5.8	5.7
Durable goods	641	767	773	4.9	5.5	4.9	5.6	5.9	6.0
Nondurable goods	507	506	470	5.5	5.2	5.0	5.7	5.6	5.3
Service-producing industries	3,183	3,328	3,454	5.0	5.0	5.0	5.0	5.2	5.3
Transportation and public utilities	281	226	261	4.5	3.2	3.0	3.7	4.1	3.9
Wholesale and retail trade	1,398	1,498	1,576	5.9	6.3	6.2	6.0	6.2	6.6
Finance and service industries	1,504	1,604	1,617	4.5	4.4	4.5	4.5	4.7	4.7
Government workers	502	511	517	2.8	2.5	2.9	2.8	2.8	2.9
Agricultural wage and salary workers	143	178	184	7.8	7.9	10.0	10.6	9.7	9.3

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[1] Unemployment as a percent of the civilian labor force.

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Sept. 1989	Aug. 1990	Sept. 1990	Sept. 1989	May 1990	June 1990	July 1990	Aug. 1990	Sept. 1990
DURATION									
Less than 5 weeks	3,355	3,225	3,230	3,169	3,026	3,046	3,120	3,325	3,044
5 to 14 weeks	1,737	2,197	2,112	2,030	2,236	2,048	2,159	2,046	2,479
15 weeks and over	1,237	1,414	1,476	1,359	1,374	1,406	1,513	1,609	1,620
15 to 26 weeks	664	674	755	769	764	763	809	845	872
27 weeks and over	573	741	721	590	610	643	704	764	748
Average (mean) duration, in weeks	11.3	12.1	12.2	11.5	11.6	12.0	12.0	12.3	12.5
Median duration, in weeks	4.2	5.2	5.1	5.0	5.4	5.1	5.2	5.2	6.2
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	53.0	47.2	47.4	48.3	45.6	46.9	45.9	47.6	42.6
5 to 14 weeks	27.4	32.1	31.0	31.0	33.7	31.5	31.8	29.3	34.7
15 weeks and over	19.5	20.7	21.6	20.7	20.7	21.6	22.3	23.0	22.7
15 to 26 weeks	10.5	9.9	11.1	11.7	11.5	11.7	11.9	12.1	12.2
27 weeks and over	9.1	10.8	10.6	9.0	9.2	9.9	10.4	10.9	10.5

Table A-8. Reason for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted			Seasonally adjusted					
	Sept. 1989	Aug. 1990	Sept. 1990	Sept. 1989	May 1990	June 1990	July 1990	Aug. 1990	Sept. 1990
NUMBER OF UNEMPLOYED									
Job losers	2,586	3,145	3,097	2,932	3,171	3,151	3,088	3,367	3,511
On layoff	631	824	826	852	979	918	960	973	1,127
Other job losers	1,955	2,320	2,271	2,080	2,192	2,233	2,128	2,394	2,384
Job leavers	1,162	1,078	1,056	1,034	1,014	996	1,027	984	934
Reentrants	1,997	1,935	2,074	1,920	1,820	1,789	1,960	1,879	1,986
New entrants	585	680	591	646	683	534	687	677	656
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	40.9	46.0	45.4	44.9	47.4	48.7	45.7	48.7	49.5
On layoff	10.0	12.1	12.1	13.0	14.6	14.2	14.2	14.1	15.9
Other job losers	30.9	33.9	33.3	31.8	32.8	34.5	31.5	34.7	33.6
Job leavers	18.4	15.8	15.5	15.8	15.2	15.4	15.2	14.3	13.2
Reentrants	31.5	28.3	30.4	29.4	27.2	27.7	29.0	27.2	28.0
New entrants	9.2	9.9	8.7	9.9	10.2	8.3	10.2	9.8	9.3
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	2.1	2.5	2.5	2.4	2.5	2.5	2.5	2.7	2.8
Job leavers	.9	.9	.8	.8	.8	.8	.8	.8	.7
Reentrants	1.6	1.5	1.7	1.5	1.5	1.4	1.6	1.5	1.6
New entrants	.5	.5	.5	.5	.5	.4	.5	.5	.5

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Sept. 1989	Aug. 1990	Sept. 1990	Sept. 1989	May 1990	June 1990	July 1990	Aug. 1990	Sept. 1990
Total, 16 years and over	6,604	7,003	7,069	5.3	5.3	5.2	5.5	5.6	5.7
16 to 24 years	2,426	2,387	2,454	11.1	11.0	10.3	11.0	11.5	11.6
16 to 19 years	1,188	1,168	1,128	15.0	15.6	14.1	16.3	16.7	15.5
16 to 17 years	534	494	512	17.2	20.0	16.1	17.4	19.2	18.4
18 to 19 years	664	653	652	14.2	12.8	13.4	16.2	15.0	14.4
20 to 24 years	1,238	1,219	1,326	8.5	8.5	8.2	8.3	8.8	8.6
25 years and over	4,187	4,617	4,667	4.1	4.1	4.1	4.3	4.4	4.5
25 to 54 years	3,701	4,028	4,121	4.3	4.3	4.4	4.5	4.6	4.7
55 years and over	486	536	513	3.0	3.0	2.8	3.2	3.5	3.3
Men, 16 years and over	3,679	3,883	3,943	5.4	5.4	5.3	5.6	5.7	5.8
16 to 24 years	1,361	1,253	1,326	11.9	11.2	11.1	11.6	11.6	12.0
16 to 19 years	637	644	634	15.7	18.0	16.4	17.5	17.8	16.7
16 to 17 years	311	287	274	19.5	20.6	16.4	18.4	21.5	18.8
18 to 19 years	340	351	379	13.7	13.4	14.8	16.3	15.5	16.2
20 to 24 years	724	609	692	9.8	8.8	8.9	8.5	8.5	9.5
25 years and over	2,313	2,616	2,542	4.1	4.1	4.1	4.4	4.6	4.8
25 to 54 years	1,978	2,234	2,274	4.1	4.3	4.2	4.5	4.6	4.7
55 years and over	310	336	342	3.5	3.4	3.1	3.6	3.2	3.8
Women, 16 years and over	2,925	3,140	3,126	5.2	5.2	5.0	5.3	5.6	5.6
16 to 24 years	1,065	1,134	1,128	10.2	10.7	9.3	10.4	11.4	11.2
16 to 19 years	561	524	494	14.4	14.9	12.8	14.9	15.8	14.2
16 to 17 years	223	207	236	14.7	19.4	16.9	16.4	16.6	17.9
18 to 19 years	344	302	273	14.8	12.2	11.8	13.8	14.4	12.6
20 to 24 years	514	610	634	7.7	8.4	7.5	8.0	9.2	8.8
25 years and over	1,884	2,001	2,025	4.1	4.1	4.1	4.2	4.2	4.4
25 to 54 years	1,723	1,784	1,847	4.4	4.6	4.4	4.4	4.5	4.6
55 years and over	155	203	171	2.4	2.5	2.4	2.6	3.1	2.6

[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	Sept. 1989	Aug. 1990	Sept. 1990	Sept. 1989	May 1990	June 1990	July 1990	Aug. 1990	Sept. 1990
Civilian noninstitutional population	27,177	27,711	27,761	27,177	27,566	27,612	27,668	27,711	27,761
Civilian labor force	17,632	17,773	17,518	17,641	17,660	17,540	17,448	17,498	17,527
Participation rate	64.9	64.1	63.1	64.9	64.1	63.5	63.1	63.1	63.1
Employed	15,896	15,958	15,684	15,847	16,021	15,883	15,655	15,671	15,629
Employment-population ratio[2]	58.5	57.6	56.5	58.3	58.1	57.5	56.6	56.6	56.3
Unemployed	1,736	1,815	1,834	1,794	1,640	1,657	1,793	1,827	1,897
Unemployment rate	9.8	10.2	10.5	10.2	9.3	9.4	10.3	10.4	10.8
Not in labor force	9,545	9,938	10,243	9,536	9,906	10,072	10,220	10,213	10,234

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	Sept. 1989	Sept. 1990	Sept. 1989	Sept. 1990	Sept. 1989	Sept. 1990
Total, 16 years and over[1]	117,498	117,961	6,330	6,818	5.1	5.5
Managerial and professional specialty	30,493	30,558	715	792	2.3	2.5
Executive, administrative, and managerial	14,882	14,799	405	414	2.6	2.7
Professional specialty	15,611	15,759	310	378	1.9	2.3
Technical, sales, and administrative support	35,728	36,358	1,499	1,707	4.0	4.5
Technicians and related support	3,488	3,741	91	134	2.5	3.5
Sales occupations	13,939	14,034	617	730	4.2	4.9
Administrative support, including clerical	18,302	18,582	791	843	4.1	4.3
Service occupations	15,626	15,719	1,089	1,170	6.5	6.9
Private household	778	766	37	48	4.5	5.9
Protective service	1,983	1,923	101	94	4.9	4.7
Service, except private household and protective	12,864	13,031	951	1,029	6.9	7.3
Precision production, craft, and repair	13,838	13,626	666	832	4.6	5.8
Mechanics and repairers	4,507	4,447	168	175	3.6	3.8
Construction trades	5,247	5,015	328	453	5.9	8.3
Other precision production, craft, and repair	4,084	4,163	170	205	4.0	4.7
Operators, fabricators, and laborers	18,156	18,047	1,482	1,414	7.5	7.3
Machine operators, assemblers, and inspectors	8,349	8,191	629	657	7.0	7.4
Transportation and material moving occupations	5,129	5,087	267	273	4.9	5.1
Handlers, equipment cleaners, helpers, and laborers	4,681	4,770	586	484	11.1	9.2
Construction laborers	768	795	148	126	16.1	13.7
Other handlers, equipment cleaners, helpers, and laborers	3,912	3,974	438	358	10.1	8.3
Farming, forestry, and fishing	3,656	3,654	177	208	4.6	5.4

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Sept. 1989	Sept. 1990	Sept. 1989	Sept. 1990	Sept. 1989	Sept. 1990	Sept. 1989	Sept. 1990	Sept. 1989	Sept. 1990
VIETNAM-ERA VETERANS										
Total, 35 years and over	7,488	7,666	6,843	7,010	6,617	6,742	226	268	3.3	3.8
35 to 49 years	6,486	6,507	6,141	6,166	5,942	5,916	199	250	3.2	4.0
35 to 39 years	1,673	1,360	1,561	1,295	1,486	1,216	75	79	4.8	6.1
40 to 44 years	3,298	3,265	3,146	3,096	3,058	2,975	88	121	2.8	3.9
45 to 49 years	1,517	1,882	1,434	1,775	1,397	1,725	37	50	2.6	2.8
50 years and over	1,002	1,161	702	844	675	825	27	19	3.8	2.2
NONVETERANS										
Total, 35 to 49 years	16,376	17,623	15,375	16,520	14,873	15,968	502	553	3.3	3.3
35 to 39 years	7,506	8,094	7,121	7,676	6,867	7,420	255	256	3.6	3.3
40 to 44 years	4,758	5,334	4,485	4,971	4,341	4,797	143	174	3.2	3.5
45 to 49 years	4,112	4,195	3,770	3,873	3,665	3,751	105	122	2.8	3.2

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 35 to 49 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

Table A-12. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Sept. 1989	Aug. 1990	Sept. 1990	Sept. 1989	May 1990	June 1990	July 1990	Aug. 1990	Sept. 1990
California									
Civilian noninstitutional population	21,580	21,999	22,039	21,580	21,877	21,918	21,961	21,999	22,039
Civilian labor force	14,635	14,940	14,606	14,661	14,801	14,801	14,751	14,816	14,616
Employed	13,909	14,126	13,761	13,914	13,998	14,073	13,995	14,010	13,747
Unemployed	726	813	846	747	803	729	756	806	869
Unemployment rate	5.0	5.4	5.8	5.1	5.4	4.9	5.1	5.4	5.9
Florida									
Civilian noninstitutional population	9,939	10,150	10,169	9,939	10,091	10,111	10,132	10,150	10,169
Civilian labor force	6,162	6,455	6,419	6,184	6,282	6,294	6,313	6,365	6,450
Employed	5,809	6,014	6,024	5,834	5,931	5,886	5,953	5,939	6,061
Unemployed	353	440	395	350	351	408	360	426	389
Unemployment rate	5.7	6.8	6.2	5.7	5.6	6.5	5.7	6.7	6.0
Illinois									
Civilian noninstitutional population	8,841	8,879	8,882	8,841	8,867	8,871	8,876	8,879	8,882
Civilian labor force	6,060	6,025	6,029	6,054	5,987	5,986	6,102	5,954	6,008
Employed	5,725	5,644	5,636	5,680	5,670	5,625	5,691	5,566	5,573
Unemployed	335	381	393	374	317	361	411	388	435
Unemployment rate	5.5	6.3	6.5	6.2	5.3	6.0	6.7	6.5	7.2
Massachusetts									
Civilian noninstitutional population	4,618	4,620	4,621	4,618	4,619	4,620	4,620	4,620	4,621
Civilian labor force	3,121	3,238	3,147	3,155	3,203	3,172	3,157	3,171	3,167
Employed	2,986	3,031	2,953	3,017	3,028	2,987	2,963	2,960	2,968
Unemployed	134	207	194	138	175	185	194	211	199
Unemployment rate	4.3	6.4	6.2	4.4	5.5	5.8	6.1	6.7	6.3
Michigan									
Civilian noninstitutional population	6,986	7,002	7,003	6,986	6,997	6,999	7,001	7,002	7,003
Civilian labor force	4,614	4,687	4,579	4,611	4,591	4,631	4,614	4,599	4,568
Employed	4,270	4,348	4,265	4,251	4,238	4,294	4,271	4,237	4,237
Unemployed	344	340	315	360	353	337	343	362	331
Unemployment rate	7.5	7.4	6.9	7.8	7.7	7.3	7.4	7.9	7.2
New Jersey									
Civilian noninstitutional population	6,032	6,026	6,027	6,032	6,025	6,026	6,026	6,026	6,027
Civilian labor force	3,950	4,104	4,041	3,992	4,012	4,037	4,073	4,066	4,083
Employed	3,780	3,915	3,838	3,812	3,820	3,845	3,879	3,872	3,870
Unemployed	170	189	203	180	192	192	194	194	213
Unemployment rate	4.3	4.6	5.0	4.5	4.8	4.8	4.8	4.8	5.2
New York									
Civilian noninstitutional population	13,805	13,801	13,801	13,805	13,800	13,801	13,802	13,801	13,801
Civilian labor force	8,587	8,731	8,671	8,666	8,775	8,732	8,686	8,586	8,751
Employed	8,140	8,311	8,198	8,203	8,328	8,287	8,222	8,155	8,267
Unemployed	447	420	473	463	447	445	464	431	484
Unemployment rate	5.2	4.8	5.5	5.3	5.1	5.1	5.3	5.0	5.5
North Carolina									
Civilian noninstitutional population	4,951	5,008	5,012	4,951	4,991	4,996	5,002	5,008	5,012
Civilian labor force	3,397	3,418	3,397	3,407	3,451	3,438	3,410	3,370	3,407
Employed	3,278	3,300	3,287	3,272	3,312	3,312	3,252	3,247	3,280
Unemployed	119	118	110	135	139	126	158	123	127
Unemployment rate	3.5	3.5	3.3	4.0	4.0	3.7	4.6	3.6	3.7
Ohio									
Civilian noninstitutional population	8,266	8,288	8,290	8,266	8,281	8,283	8,286	8,288	8,290
Civilian labor force	5,425	5,504	5,436	5,441	5,428	5,419	5,411	5,446	5,450
Employed	5,158	5,246	5,177	5,153	5,107	5,135	5,104	5,174	5,166
Unemployed	267	258	259	288	321	284	307	272	284
Unemployment rate	4.9	4.7	4.8	5.3	5.9	5.2	5.7	5.0	5.2

See footnotes at end of table.

Table A-13. Employment status of the civilian population for eleven large States—Continued

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Sept. 1989	Aug. 1990	Sept. 1990	Sept. 1989	May 1990	June 1990	July 1990	Aug. 1990	Sept. 1990
Pennsylvania									
Civilian noninstitutional population	9,372	9,392	9,393	9,372	9,385	9,387	9,390	9,392	9,393
Civilian labor force	5,823	5,877	5,858	5,808	5,841	5,894	5,869	5,777	5,850
Employed	5,588	5,624	5,561	5,550	5,558	5,623	5,574	5,496	5,531
Unemployed	235	253	297	258	283	271	295	281	319
Unemployment rate	4.0	4.3	5.1	4.4	4.8	4.6	5.0	4.9	5.5
Texas									
Civilian noninstitutional population	12,240	12,391	12,404	12,240	12,351	12,366	12,379	12,391	12,404
Civilian labor force	8,439	8,459	8,481	8,428	8,435	8,452	8,371	8,325	8,484
Employed	7,907	7,958	7,955	7,890	7,890	7,979	7,853	7,833	7,953
Unemployed	532	501	526	538	545	473	518	492	531
Unemployment rate	6.3	5.9	6.2	6.4	6.5	5.6	6.2	5.9	6.3

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[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

Table A-14. Persons not in the labor force by reason, sex, and race, quarterly averages

(In thousands)

Reason, sex, and race	Not seasonally adjusted		Seasonally adjusted				
	1989	1990	1989		1990		
	III	III	III	IV	I	II	III
TOTAL							
Total not in labor force	61,447	62,370	62,567	62,624	62,793	62,916	63,488
Do not want a job now	56,153	57,297	57,626	57,577	57,272	57,476	(1)
Current activity: Going to school	3,865	4,336	6,995	6,229	6,379	6,709	(1)
Ill, disabled	4,694	5,075	4,671	4,767	4,853	5,033	5,096
Keeping house	24,028	23,855	24,031	23,886	23,861	23,306	23,807
Retired	18,026	18,751	17,673	18,270	18,227	18,378	18,510
Other activity	5,550	5,479	4,256	4,425	4,062	4,061	4,052
Want a job now	5,294	5,073	5,463	5,178	5,452	5,616	5,264
Reason not looking: School attendance	912	850	1,447	1,246	1,406	1,440	1,423
Ill health, disability	915	857	886	907	920	922	866
Home responsibilities	1,307	1,382	1,175	1,251	1,164	1,262	1,245
Think cannot get a job	835	841	817	827	747	893	835
Job-market factors	513	522	518	563	488	537	520
Personal factors	322	319	299	263	259	356	315
Other reasons[2]	1,325	1,163	1,136	946	1,214	1,096	993
Men							
Total not in labor force	20,136	20,784	21,009	20,953	21,193	21,310	21,622
Do not want a job now	18,322	19,062	19,160	19,221	19,201	19,368	(1)
Want a job now	1,813	1,722	2,015	1,765	2,009	2,039	1,873
Reason not looking: School attendance	440	419	735	583	747	694	732
Ill health, disability	503	446	476	431	450	485	436
Think cannot get a job	351	394	349	377	315	366	407
Other reasons[2]	519	463	455	374	494	493	397
Women							
Total not in labor force	41,311	41,586	41,558	41,670	41,600	41,607	41,846
Do not want a job now	37,831	38,234	38,496	38,356	38,072	38,107	(1)
Want a job now	3,481	3,351	3,448	3,411	3,448	3,577	3,391
Reason not looking: School attendance	472	431	712	663	659	746	692
Ill health, disability	412	411	412	476	470	437	430
Home responsibilities	1,307	1,382	1,175	1,251	1,164	1,262	1,245
Think cannot get a job	484	447	468	450	432	527	429
Other reasons	806	700	681	571	719	605	596
White							
Total not in labor force	52,175	52,410	53,052	52,855	52,999	53,016	53,261
Do not want a job now	48,513	48,693	49,310	49,296	48,997	49,033	49,384
Want a job now	3,658	3,698	3,785	3,659	4,030	3,989	3,882
Reason not looking: School attendance	607	590	983	831	986	961	1,015
Ill health, disability	587	641	599	634	683	649	673
Home responsibilities	898	1,015	801	889	848	922	918
Think cannot get a job	509	554	525	531	549	629	577
Other reasons[2]	1,048	898	878	784	960	814	748
Black							
Total not in labor force	7,347	7,730	7,547	7,601	7,678	7,716	7,934
Do not want a job now	5,875	6,578	6,032	6,291	6,401	6,411	6,758
Want a job now	1,472	1,158	1,558	1,295	1,291	1,370	1,229
Reason not looking: School attendance	284	204	427	343	351	418	326
Ill health, disability	310	187	288	285	238	232	177
Home responsibilities	362	320	354	313	298	268	318
Think cannot get a job	298	244	293	232	196	203	208
Other reasons[2]	239	203	226	142	218	251	198

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[1] Publication of seasonally adjusted data has been temporarily suspended until altered seasonal patterns can be adequately measured by the seasonal adjustment process.

[2] Includes small number of men not looking for work because of "home responsibilities."

NOTE: Detail may not add to not-in-labor force totals because of the weighting procedures.

Table B-1. Employees on nonfarm payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Sept. 1989	July 1990	Aug. 1990p/	Sept. 1990p/	Sept. 1989	May 1990	June 1990	July 1990	Aug. 1990p/	Sept. 1990p/
Total	109.195	110.477	110.341	110.854	108.868	110.617	110.829	110.740	110.657	110.556
Total private	91.583	93.008	93.132	92.812	90.985	92.120	92.282	92.380	92.307	92.240
Goods-producing industries	25.723	25.352	25.456	25.336	25.384	25.191	25.162	25.105	25.013	24.929
Mining	718	752	749	748	709	738	744	745	736	738
Oil and gas extraction	391.7	415.7	416.4	416.5	389	408	413	413	410	411
Construction	5.490	5.552	5.537	5.443	5.225	5.286	5.270	5.229	5.196	5.176
General building contractors	1.392.0	1.385.9	1.380.8	1.356.4	1.343	1.334	1.336	1.319	1.306	1.300
Manufacturing	19.506	19.048	19.170	19.145	19.370	19.167	19.148	19.131	19.083	19.017
Production workers	13.336	12.919	13.032	13.041	13.204	13.025	13.007	13.010	12.967	12.911
Durable goods	11.414	11.125	11.124	11.114	11.369	11.217	11.201	11.179	11.130	11.072
Production workers	7.612	7.365	7.378	7.391	7.567	7.450	7.439	7.438	7.396	7.347
Lumber and wood products	764.2	758.0	756.8	750.6	758	748	743	742	739	737
Furniture and fixtures	524.7	501.2	511.2	510.1	524	516	515	511	514	509
Stone, clay, and glass products	575.3	561.3	561.5	557.3	563	559	556	552	551	546
Primary metal industries	768.8	751.7	754.3	753.6	767	755	756	759	755	751
Blast furnaces and basic steel products	276.4	272.7	272.2	270.6	276	271	270	271	271	270
Fabricated metal products	1.445.0	1.405.0	1.416.1	1.418.6	1.438	1.417	1.415	1.419	1.420	1.413
Industrial machinery and equipment	2.126.4	2.097.4	2.085.2	2.076.7	2.132	2.112	2.108	2.104	2.096	2.083
Electronic and other electrical equipment	1.747.4	1.686.1	1.686.9	1.677.5	1.743	1.711	1.703	1.693	1.685	1.672
Transportation equipment	2.045.8	1.990.5	1.974.6	1.986.7	2.041	2.010	2.021	2.015	1.997	1.983
Motor vehicles and equipment	850.4	804.3	798.5	812.1	843	817	826	824	814	805
Instruments and related products	1.022.9	996.0	992.8	992.8	1.023	1.002	1.000	996	990	994
Miscellaneous manufacturing	393.3	377.6	386.5	390.0	388	387	384	386	383	384
Nondurable goods	8.092	7.943	8.046	8.031	8.001	7.950	7.947	7.952	7.953	7.945
Production workers	5.724	5.554	5.654	5.650	5.637	5.573	5.568	5.572	5.571	5.564
Food and kindred products	1.733.7	1.684.4	1.730.8	1.729.5	1.653	1.650	1.643	1.645	1.650	1.649
Tobacco products	49.9	43.6	47.2	48.7	48	46	47	46	47	47
Textile mill products	724.0	691.9	703.4	700.3	720	703	702	702	701	697
Apparel and other textile products	1.074.7	997.0	1.025.4	1.029.0	1.070	1.031	1.029	1.027	1.025	1.023
Paper and allied products	698.1	704.6	705.8	701.8	697	698	699	701	702	701
Printing and publishing	1.558.9	1.578.0	1.578.7	1.573.2	1.566	1.581	1.582	1.583	1.583	1.581
Chemicals and allied products	1.076.2	1.094.5	1.094.3	1.089.9	1.075	1.085	1.086	1.088	1.087	1.089
Petroleum and coal products	159.4	163.7	164.4	163.9	157	159	160	160	161	162
Rubber and misc. plastics products	888.1	864.2	878.5	869.7	880	868	871	874	873	870
Leather and leather products	136.7	128.6	125.7	125.3	135	129	128	126	124	124
Service-producing industries	83.472	85.125	84.885	85.518	83.484	85.426	85.667	85.635	85.644	85.627
Transportation and public utilities	5.700	5.843	5.850	5.905	5.656	5.833	5.846	5.841	5.845	5.859
Transportation	3.525	3.607	3.615	3.688	3.483	3.613	3.627	3.625	3.630	3.644
Communications and public utilities	2.175	2.236	2.235	2.217	2.173	2.220	2.219	2.216	2.215	2.215
Wholesale trade	6.315	6.416	6.408	6.386	6.303	6.369	6.383	6.374	6.375	6.374
Durable goods	3.738	3.796	3.784	3.762	3.742	3.770	3.779	3.775	3.769	3.766
Nondurable goods	2.577	2.620	2.624	2.624	2.561	2.599	2.604	2.599	2.606	2.608
Retail trade	19.481	19.990	19.957	19.868	19.634	19.795	19.822	19.831	19.838	19.828
General merchandise stores	2.486.8	2.433.8	2.456.3	2.432.0	2.554	2.487	2.496	2.494	2.491	2.482
Food stores	3.204.2	3.314.2	3.301.5	3.288.1	3.211	3.295	3.302	3.304	3.298	3.295
Automotive dealers and service stations	2.124.1	2.156.1	2.160.6	2.155.0	2.109	2.121	2.120	2.131	2.135	2.140
Eating and drinking places	6.619.2	6.784.3	6.805.2	6.768.5	6.476	6.583	6.598	6.619	6.613	6.623
Finance, insurance, and real estate	6.764	6.936	6.933	6.853	6.753	6.838	6.844	6.842	6.850	6.843
Finance	3.311	3.371	3.371	3.338	3.317	3.338	3.344	3.341	3.348	3.345
Insurance	2.105	2.158	2.157	2.145	2.111	2.139	2.143	2.147	2.151	2.151
Real estate	1.348	1.407	1.405	1.370	1.325	1.361	1.357	1.354	1.351	1.347
Services	27.400	28.513	28.528	28.464	27.335	28.094	28.225	28.287	28.386	28.407
Business services	5.036.9	5.089.9	5.109.8	5.097.5	4.980	5.048	5.068	5.051	5.053	5.037
Health services	7.646.7	8.172.6	8.218.8	8.238.9	7.648	8.040	8.096	8.132	8.194	8.239
Government	17.612	17.469	17.209	18.042	17.883	18.497	18.547	18.440	18.350	18.316
Federal	2.978	3.200	3.064	2.998	2.992	3.346	3.338	3.164	3.049	3.010
State	4.149	4.070	4.084	4.233	4.215	4.262	4.296	4.298	4.317	4.297
Local	10.485	10.199	10.061	10.811	10.676	10.889	10.913	10.978	10.984	11.009

p/ = preliminary

Note on temporary census workers

The number of temporary workers associated with the 1990 census has an impact on the employment levels for the Federal government, as well as for higher aggregates. The estimate of these workers was 22,000 in January, 27,000 in February, 117,000 in March, 178,000 in April, 378,000 in May, 367,000 in June, 194,000 in July, and 84,000 in August. For September, the estimated number (preliminary) was 24,000.

Table B-2. Average weekly hours of production or nonsupervisory workers[1] on private nonfarm payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Sept. 1989	July 1990	Aug. 1990p/	Sept. 1990p/	Sept. 1989	May 1990	June 1990	July 1990	Aug. 1990p/	Sept. 1990p/
Total private	34.7	34.9	34.8	34.8	34.6	34.5	34.7	34.5	34.5	34.7
Mining	44.0	43.6	43.9	44.3	43.7	43.6	44.4	43.7	43.8	43.9
Construction	38.6	38.3	39.0	39.3	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	41.2	40.5	40.8	41.2	40.9	40.9	41.0	40.9	41.0	41.0
Overtime hours	4.1	3.6	3.9	4.1	3.8	3.8	3.8	3.7	3.8	3.7
Durable goods	41.7	41.0	41.2	41.7	41.3	41.5	41.6	41.5	41.6	41.6
Overtime hours	4.1	3.6	3.9	4.1	3.8	3.9	3.9	3.8	3.9	3.8
Lumber and wood products	40.4	40.0	40.6	40.9	40.1	40.4	40.3	40.2	40.4	40.7
Furniture and fixtures	40.1	38.9	39.6	39.5	39.5	39.2	39.3	39.6	39.4	38.9
Stone, clay, and glass products	42.7	42.0	42.7	42.6	42.2	42.1	42.3	41.7	42.3	42.1
Primary metal industries	42.8	42.8	42.6	43.2	42.6	43.0	43.0	43.1	43.0	43.0
Blast furnaces and basic steel products	43.1	44.1	43.2	43.8	43.1	43.5	43.3	44.1	43.5	43.8
Fabricated metal products	41.7	40.9	41.3	41.7	41.5	41.7	41.6	41.7	41.6	41.5
Industrial machinery and equipment	42.3	41.6	41.6	42.2	42.2	42.1	42.0	42.0	42.1	42.1
Electronic and other electrical equipment	41.2	40.1	40.3	41.0	41.0	40.9	41.0	40.7	40.5	40.9
Transportation equipment	42.8	41.9	41.9	42.8	42.7	42.5	42.6	42.8	42.7	42.7
Motor vehicles and equipment	43.4	42.3	42.5	44.0	43.0	43.4	43.7	43.6	43.8	43.5
Instruments and related products	40.9	40.6	40.9	41.4	40.9	41.1	41.2	41.2	41.3	41.4
Miscellaneous manufacturing	39.3	38.8	39.6	39.9	39.2	39.4	39.4	39.5	39.8	39.9
Nondurable goods	40.5	39.9	40.3	40.5	40.2	40.1	40.3	40.1	40.2	40.1
Overtime hours	4.1	3.6	3.9	4.1	3.7	3.6	3.6	3.6	3.7	3.6
Food and kindred products	41.5	40.6	41.4	41.8	40.9	40.8	40.9	40.5	40.9	41.1
Tobacco products	40.3	38.6	38.1	38.8	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	41.0	39.7	40.2	40.2	40.6	40.2	40.4	40.2	39.9	39.7
Apparel and other textile products	36.9	36.3	36.7	36.8	36.8	36.6	36.7	36.6	36.6	36.7
Paper and allied products	43.7	43.2	43.2	43.4	43.2	43.3	43.5	43.5	43.5	42.9
Printing and publishing	38.4	37.7	38.3	38.5	38.0	37.9	38.0	38.0	38.2	38.0
Chemicals and allied products	42.5	42.1	42.2	42.7	42.5	42.6	42.6	42.4	42.5	42.7
Petroleum and coal products	44.4	44.7	43.8	44.3	(2)	(2)	(2)	(2)	(2)	(2)
Rubber and misc. plastics products	41.3	40.9	41.1	41.5	41.1	41.4	41.6	41.5	41.3	41.3
Leather and leather products	38.2	37.4	38.0	37.4	38.2	37.4	37.5	37.4	37.7	37.4
Transportation and public utilities	38.9	39.4	39.3	39.4	38.8	39.1	39.2	39.0	39.0	39.3
Wholesale trade	38.1	38.3	38.1	38.2	38.1	38.0	38.1	38.1	38.1	38.1
Retail trade	28.9	29.7	29.4	28.9	28.9	29.0	29.0	28.9	28.7	28.9
Finance, insurance, and real estate	35.6	36.2	35.7	36.2	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.5	33.0	32.8	32.7	32.6	32.5	32 6	32.6	32.5	32.8

[1] Data relate to production workers in mining and manufacturing; construction workers in construction; and nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonfarm payrolls.

[2] These series are not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary.

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers1/ on private nonfarm payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Sept. 1989	July 1990	Aug. 1990p/	Sept. 1990p/	Sept. 1989	July 1990	Aug. 1990p/	Sept. 1990p/
Total private	$9.77	$10.00	$10.00	$10.17	$339.02	$349.00	$348.00	$353.92
Seasonally adjusted	9.73	10.07	10.08	10.13	336.66	347.42	347.76	351.51
Mining	13.29	13.69	13.62	13.74	584.76	596.88	597.92	[illegible]
Construction	13.65	13.70	13.74	14.10	526.89	524.71	533.86	554.13
Manufacturing	10.56	10.88	10.82	10.94	435.07	440.64	441.46	450.73
Durable goods	11.11	11.38	11.35	11.49	463.29	466.58	467.62	479.13
Lumber and wood products	8.95	9.16	9.15	9.20	361.58	366.40	371.49	376.28
Furniture and fixtures	8.40	8.50	8.57	8.65	336.84	330.65	339.37	341.68
Stone, clay, and glass products	10.87	11.21	11.15	11.22	464.15	470.82	476.11	477.97
Primary metal industries	12.54	13.04	12.94	13.02	536.71	558.11	551.24	562.46
Blast furnaces and basic steel products	14.40	14.95	14.85	14.94	620.64	659.30	641.52	654.37
Fabricated metal products	10.68	10.86	10.84	10.95	445.36	444.17	447.69	456.62
Industrial machinery and equipment	11.46	11.78	11.80	11.92	484.76	490.05	490.88	503.02
Electronic and other electrical equipment	10.13	10.34	10.32	10.42	417.36	414.63	415.90	427.22
Transportation equipment	13.86	14.06	14.08	14.36	593.21	589.11	589.95	614.61
Motor vehicles and equipment	14.45	14.59	14.55	14.90	627.13	617.16	618.38	655.60
Instruments and related products	10.94	11.37	11.36	11.45	447.45	461.62	464.62	474.03
Miscellaneous manufacturing	8.36	8.60	8.60	8.63	328.55	333.68	340.56	344.34
Nondurable goods	9.81	10.20	10.12	10.19	397.31	406.98	407.84	412.70
Food and kindred products	9.37	9.68	9.54	9.57	388.86	393.01	394.96	400.03
Tobacco products	14.71	17.42	16.23	15.76	592.81	672.41	618.36	611.49
Textile mill products	7.74	8.01	8.04	8.09	317.34	318.00	323.21	325.22
Apparel and other textile products	6.41	6.59	6.64	6.70	236.53	239.22	243.69	246.56
Paper and allied products	12.04	12.36	12.29	12.39	526.15	533.95	530.93	537.73
Printing and publishing	11.07	11.25	11.29	11.41	425.09	424.13	432.41	439.29
Chemicals and allied products	13.20	13.58	13.55	13.63	561.00	571.72	571.81	582.00
Petroleum and coal products	15.41	16.22	16.01	16.35	684.20	725.03	701.24	724.31
Rubber and misc. plastics products	9.50	9.85	9.78	9.86	392.35	402.87	401.96	409.19
Leather and leather products	6.65	6.79	6.84	6.94	254.03	253.95	259.92	259.56
Transportation and public utilities	12.73	12.99	12.97	13.11	495.20	511.81	509.72	516.53
Wholesale trade	10.48	10.82	10.77	10.92	399.29	414.41	410.34	417.14
Retail trade	6.59	6.74	6.75	6.87	190.45	200.18	198.45	198.54
Finance, insurance, and real estate	9.60	10.00	9.94	10.09	341.76	362.00	354.86	365.26
Services	9.49	9.79	9.77	9.99	308.43	323.07	320.46	326.67

1/ See footnote 1, table B-2.

p = preliminary.

Table B-4. Average hourly earnings of production or nonsupervisory workers1/ on private nonfarm payrolls by industry, seasonally adjusted

Industry	Sept. 1989	May 1990	June 1990	July 1990	Aug. 1990p/	Sept. 1990p/	Percent change from: Aug. 1990-Sept. 1990
Total private:							
Current dollars	$9.73	$9.98	$10.03	$10.07	$10.08	$10.13	0.5
Constant (1982) dollars2/	7.64	7.58	7.58	7.58	7.55	N.A.	(3)
Mining	13.31	13.58	13.73	13.79	13.72	$13.75	.2
Construction	13.56	13.71	13.73	13.76	13.78	14.00	1.6
Manufacturing	10.55	10.81	10.86	10.89	10.90	10.93	.3
Excluding overtime4/	10.09	10.35	10.38	10.40	10.43	10.45	.3
Transportation and public utilities	12.68	12.88	12.92	13.02	13.01	13.06	.4
Wholesale trade	10.48	10.74	10.80	10.86	10.84	10.92	.7
Retail trade	6.57	6.76	6.78	6.79	6.82	6.85	.4
Finance, insurance, and real estate	9.65	9.87	9.98	10.08	10.04	10.14	1.0
Services	9.69	9.80	9.85	9.92	9.92	9.99	.7

1/ See footnote 1, table B-2.

2/ The Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) is used to deflate this series.

3/ Change was -0.7 percent from July 1990 to August 1990, the latest month available.

4/ Derived by assuming that overtime hours are paid at the rate of time and one-half.

N.A. = not available.

p = preliminary.

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers1/ on private nonfarm payrolls by industry

(1982=100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Sept. 1989	July 1990	Aug. 1990p/	Sept. 1990p/	Sept. 1989	May 1990	June 1990	July 1990	Aug. 1990p/	Sept. 1990p/
Total private	124.6	127.1	127.1	125.9	123.2	124.6	125.3	124.8	124.5	124.7
Goods-producing industries	115.4	111.5	113.2	112.0	111.9	111.2	111.7	110.5	110.5	108.7
Mining	64.5	67.6	67.7	68.2	62.9	65.9	66.0	66.9	66.0	66.4
Construction	152.2	151.4	154.2	142.3	140.6	142.1	144.3	138.4	139.8	131.6
Manufacturing	110.8	105.6	107.3	108.4	109.0	107.3	107.6	107.4	107.1	106.6
Durable goods	110.1	106.7	105.5	106.9	108.9	107.3	107.1	107.1	106.3	105.9
Lumber and wood products	135.5	132.5	134.3	133.7	131.5	131.9	130.5	129.7	129.7	130.3
Furniture and fixtures	131.6	120.9	125.5	125.3	129.5	125.7	126.0	125.8	125.7	122.9
Stone, clay, and glass products	116.3	111.2	112.9	112.0	112.3	110.5	110.3	108.2	109.5	108.2
Primary metal industries	95.2	92.5	92.3	93.7	94.3	93.5	93.5	94.3	93.4	92.9
Blast furnaces and basic steel products	82.4	82.8	80.9	81.4	82.8	81.2	80.4	82.3	80.8	81.9
Fabricated metal products	110.8	105.1	106.9	108.4	109.6	108.3	107.8	108.3	108.1	107.4
Industrial machinery and equipment	99.9	96.5	95.9	97.0	100.0	98.9	98.4	98.5	97.9	96.9
Electronic and other electrical equipment	113.0	105.5	106.3	107.8	112.2	109.5	109.6	108.3	107.1	107.4
Transportation equipment	125.8	118.6	117.6	121.8	125.1	121.8	123.3	124.1	122.6	121.3
Motor vehicles and equipment	137.1	125.0	124.3	131.6	136.0	131.2	133.7	133.2	131.5	128.9
Instruments and related products	89.0	85.2	85.8	87.2	88.5	87.7	87.2	86.8	86.3	86.7
Miscellaneous manufacturing	106.4	99.3	104.6	107.1	104.8	104.2	102.7	104.5	104.1	104.8
Nondurable goods	111.8	106.8	109.8	110.4	109.2	107.9	108.2	107.7	107.9	107.7
Food and kindred products	117.7	111.4	117.9	119.2	109.1	109.2	108.7	107.9	109.3	110.0
Tobacco products	75.6	59.5	65.0	68.5	69.3	65.8	64.3	66.6	66.3	63.1
Textile mill products	106.4	97.9	101.0	100.5	104.9	100.9	101.2	100.6	99.8	98.8
Apparel and other textile products	98.2	88.5	92.6	93.0	97.5	92.9	93.0	92.4	92.3	92.4
Paper and allied products	111.5	111.4	111.9	111.7	109.9	110.4	111.6	111.6	111.8	110.4
Printing and publishing	127.4	127.0	129.1	129.5	127.1	128.1	128.6	129.0	129.7	128.7
Chemicals and allied products	105.2	103.9	103.9	105.0	104.9	104.6	104.4	104.3	103.8	104.7
Petroleum and coal products	88.7	91.4	90.6	90.3	86.3	88.0	93.0	88.3	88.0	88.1
Rubber and misc. plastics products	128.1	123.4	125.3	126.8	127.5	126.0	127.3	127.2	126.6	126.0
Leather and leather products	66.5	57.1	60.6	59.0	65.7	61.5	61.1	59.8	59.1	58.0
Service-producing industries	128.5	134.2	133.3	132.2	128.2	130.6	131.4	131.2	130.8	131.9
Transportation and public utilities	112.8	117.0	116.6	118.4	111.5	116.0	116.7	115.8	115.3	116.9
Wholesale trade	118.7	121.2	120.3	120.0	118.4	118.9	119.0	119.5	119.3	119.3
Retail trade	124.1	129.2	128.8	125.0	123.8	123.1	123.3	125.1	124.0	124.8
Finance, insurance, and real estate	120.7	126.2	124.6	124.2	120.7	122.5	122.9	123.1	122.8	124.4
Services	141.4	148.9	148.3	147.3	141.4	144.6	145.8	145.9	146.0	147.4

1/ See footnote 1, table B-2

p = preliminary.

Table B-6. Diffusion indexes of employment change, seasonally adjusted

(Percent)

Time span	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.
	Private nonfarm payrolls, 356 industries1/											
Over 1-month span:												
1989	64.5	58.7	58.0	57.0	55.6	57.3	55.8	57.7	50.0	55.2	59.6	56.6
1990	55.6	58.6	53.7	49.9	55.8	49.9	50.8	p/47.3	p/44.0			
Over 3-month span:												
1989	65.3	64.2	60.0	60.1	59.7	58.5	59.7	54.5	55.2	55.0	57.7	60.3
1990	58.4	56.7	54.8	53.1	53.7	55.3	p/51.1	p/45.6				
Over 6-month span:												
1989	67.6	65.4	65.0	61.0	61.2	58.7	57.0	58.1	56.2	58.3	57.4	58.4
1990	57.3	56.5	55.5	55.9	p/52.0	p/48.6						
Over 12-month span:												
1989	67.1	67.7	65.3	64.6	64.9	61.2	60.0	59.8	58.6	57.3	56.7	56.0
1990	56.8	p/53.8	p/52.9									
	Manufacturing payrolls, 139 industries1/											
Over 1-month span:												
1989	60.4	48.6	56.4	47.1	45.3	45.7	45.0	45.7	34.2	48.6	43.5	40.2
1990	42.4	45.7	45.3	46.8	45.7	40.3	40.2	p/41.0	p/35.6			
Over 3-month span:												
1989	56.0	56.7	45.3	43.9	43.2	42.8	41.7	33.1	36.3	34.9	41.7	39.2
1990	40.3	37.1	44.2	41.4	40.6	44.2	p/40.6	p/32.7				
Over 6-month span:												
1989	56.5	49.6	49.3	43.9	42.1	37.1	36.7	34.9	34.2	33.5	33.1	36.0
1990	37.1	35.6	36.3	43.2	p/38.8	p/32.7						
Over 12-month span:												
1989	53.6	55.0	48.3	45.3	43.9	39.9	37.1	35.6	33.8	32.4	30.9	31.7
1990	31.3	p/30.9	p/30.2									

1/ Based on seasonally adjusted data for 1-, 3-, and 6-month spans and unadjusted data for the 12-month span. Data are centered within the span.

p = preliminary.

NOTE: Figures are the percent of industries with employment increasing plus one-half of the industries with unchanged employment, where 50 percent indicates an equal balance between industries with increasing and decreasing employment.

Representative **Hamilton**. Well, what does all this tell us about recession?

Mrs. **Norwood**. I think that what it seems to be saying is that the labor market at least has slowed down considerably and, at least in terms of overall payroll employment, has declined. The definition of a recession, however, is much broader than labor market data.

There is, as you know, the short hand of two quarters of downward GNP which we have not yet had. But the more technical and the more important definition is really that there have to be significant reductions, as measured by how deep they are and how widespread they are, and how long they have endured. And that is what the National Bureau of Economic Research looks at in declaring recessions.

From these labor market data one cannot discern what they would do. It seems to me that what we've had is a real slowdown and that we are no longer having the kind of growth we've had in the service-producing sector to bolster the rest of the economy.

It's clear that manufacturing and construction have been going down for a considerable period of time. They're in very bad straits. It's the service-producing sector that we're watching with very great care.

Representative **Hamilton**. Which sector?

Mrs. **Norwood**. The service-producing sector, which is where most of the people in this country now are working.

Representative **Hamilton**. So you cannot look at the employment data, the labor market data, and say on the basis of that that we're in a recession?

Mrs. **Norwood**. That's correct. That's my view. I don't think we can do that.

Representative **Hamilton**. You can't look at it and say we're near one, I guess?

Mrs. **Norwood**. I think you can say there's great risk, clearly.

Representative **Hamilton**. We had Mr. Greenspan before us the other day. He defined a recession differently, as a kind of cumulative unwinding of the economy. Where did that definition come from? Is that an accepted definition or is that one that he spun off?

Mrs. **Norwood**. Alan Greenspan is probably one of the best students of, or professors of, data reading and understanding of anybody I know. And I think that what he was talking about is essentially what I was talking about in looking at how deep the declines are, how widely dispersed they are, and how long is their duration. I think he was just using different words.

Representative **Hamilton**. That's not a very mathematical definition, is it? The other definition is two quarters of negative growth in a row; you can measure that precisely or relatively precisely. His is a little less measurable definition; is that right?

Mrs. **Norwood**. Well, I think so. And I think the major point is that it's somewhat broader. Of course, the GNP is the broadest data set that we have, but you would look at a whole lot of series to see just where we're heading.

My own view, if I may say, is that it really doesn't matter whether this is recession or not recession, we are seeing great difficulty in the labor market.

Representative HAMILTON. It's kind of hairsplitting in a way, isn't it?

Mrs. NORWOOD. Yes.

Representative HAMILTON. But if you take his definition, then what kind of data do you look at to determine whether or not you have that cumulative unwinding that he's talking about?

Mrs. NORWOOD. Clearly he would be concerned, as many are, with the financial data, credit, savings, consumer expenditures, with what's happening to profits, with many of the data series that you ticked off at the beginning in your statement, as well as the labor market data.

Representative HAMILTON. Has this recent increase in unemployment been identifiable only in certain labor markets: unskilled workers, blacks, teenagers, or whatever? Or is it pretty much across the board?

Mrs. NORWOOD. We always have greater difficulty among the minority citizens of this country, and among the less well trained when the unemployment rate begins creeping upward. It's beginning, however, to affect some of the managerial and other occupations. The other thing, of course, is that there are big differences from one part of the country to another.

Representative HAMILTON. Now, despite the increase in unemployment, the unemployment rate for teenagers fell; it fell for both white teenagers and black teenagers. Black teenagers fell 8 percent. Is there a statistical explanation for that or did they actually find jobs?

Mr. PLEWES. In part, there is a statistical explanation. This summer, despite the fact that there were fewer teenagers in the work force, their unemployment rate rose.

I think the important thing for teenagers, perhaps, is to look at their experience over the period April through September where we don't have the fluctuation caused by summertime behavior. There we find, I think, that generally speaking their unemployment rate has been about unchanged.

Representative HAMILTON. So you don't really see anything very significant there?

Mr. PLEWES. Not in this 1-month movement, sir.

Mrs. NORWOOD. And as for black teenagers, they have been in a bad situation for some time. Their rate bounces up and down a bit, but it's still not very good.

Representative HAMILTON. Since May, the number of people unemployed has risen by about 400,000. Is that increase mainly people who lost their jobs or are on layoff, or was it due mainly to an increase in the number of people coming into the labor force?

Mrs. NORWOOD. We've had over the last couple of months a big increase in the number of people who lost their jobs. We are seeing here and there more evidence now that companies, particularly large ones, are often using a week or two of closedown and furlough with employees, perhaps reminiscent of the Federal Government in furloughing people so that they can reduce their costs.

Representative HAMILTON. Is there anything in the data to suggest that people who have recently lost their jobs are having a tougher time finding new jobs?

Mrs. **NORWOOD**. We don't have anything specific to that, but clearly——

Representative **HAMILTON**. That would ordinarily be typical of recession, wouldn't it?

Mrs. **NORWOOD**. Yes.

Representative **HAMILTON**. Excuse me, I didn't mean to interrupt.

Mrs. **NORWOOD**. All I was saying was that clearly those who are in areas where there has been a significant downturn, a significant increase in unemployment, would be very much affected. The duration figures have gone up, the longer term unemployment, are edging up.

Representative **HAMILTON**. Let me just ask a question or two about inflation. The consumer price index rose 0.8 of a percent. The producer price index rose 1.3 percent in August. What is your general reaction to these figures as to the seriousness right now of our inflation problem?

Mrs. **NORWOOD**. It's always serious when the indexes go up because it means that people are faced with higher prices. Nevertheless, most of the cause seems to be oil prices, gasoline, and other kinds of energy. We don't know how long lived that will be. There are some—most of the economists with oil companies are forecasting that the high price of crude oil will go down, they have begun to go down recently, but that's something we're not sure about.

Representative **HAMILTON**. Now, you had a big jump, of course, at the pump for gasoline. Is that reflected in the August figures, that big jump in the gasoline price?

Mrs. **NORWOOD**. Yes. I want to make one other point and that is that it is important to recognize that the jumps we've had, the increases we've had for oil, in particular the PPI increases that we've had, will eventually find their way through the market, so there will be some secondary effects.

Mr. **DALTON**. Also, I think it's probably important for us to say that we are not sure that the entire impact of higher prices has been felt yet.

Representative **HAMILTON**. In that August figure.

Mr. **DALTON**. Right. We may have a further sharp increase in September.

Representative **HAMILTON**. The CPI has risen at an annual rate of 7 percent for the last 3 months, compared to 4.8 percent in 1989. What is it that accounts for that acceleration?

Mrs. **NORWOOD**. Well, a large part of it is——

Representative **HAMILTON**. Energy?

Mrs. **NORWOOD**. Energy, yes. Excluding energy, last month the CPI increased about a tenth of a percent. That's more than we would like it.

Representative **HAMILTON**. That's the core rate you're talking about?

Mrs. **NORWOOD**. It's less energy. I'm not quite sure what the core rate is. If you don't live in a house and you don't drive a car, you have the core rate.

Representative **HAMILTON**. Is there a technical definition of a core rate?

Mr. **DALTON**. No.

Mrs. **Norwood**. But most people use the CPI excluding food, shelter, and energy.

Mr. **Dalton**. Or simply food and energy.

Mrs. **Norwood**. Yes. Another approach would be take out food and energy.

Representative **Hamilton**. Is the inflation rate increase due to an increase in the prices of services at all? Is that involved?

Mrs. **Norwood**. Medical services have been going up steadily.

Do you have something to add to that, Mr. Dalton?

Mr. **Dalton**. I would only add that the acceleration up to a 7-percent rate is largely due to higher energy prices. But if you look at the entire first 8 months of 1990, you see that the index for all items less energy is running at a 6-percent rate, and that compares with the 4.6-percent rate last year. So we are seeing some acceleration outside of energy, and a good part of that is split between the services and apparel.

Representative **Hamilton**. If we had a recession, would we expect to see inflation in the price of services slow down?

Mr. **Dalton**. I'm not so sure we would.

Mrs. **Norwood**. I'm not sure that would happen to medical services, for example. It would occur with some services, clearly, but the big upward push has been medical services, and that's now what, 11 or 12 percent of GNP?

Representative **Hamilton**. So if there is price restraint in a recessionary period, it would be not in the services area but in the goods-producing area; is that right?

Mrs. **Norwood**. If there is, there will be some in the services. I wouldn't rule that out, but it's not going to be as clear cut; it wouldn't be as clear cut. And, in fact, we've had periods when we have had a kind of stagflation, as you know.

Representative **Hamilton**. Congressman Solarz.

Representative **Solarz**. Thank you very much, Mr. Chairman.

Mrs. Norwood, I noticed that the unemployment rate for blacks seems to have gone up substantially more than the unemployment rate for whites, three times as much. There's a zero increase in the unemployment rate for whites and a 0.3 increase for blacks. What accounts for that?

Mrs. **Norwood**. First of all, of course, we're comparing very different sized groups, and I'm not sure that the rate for blacks is really a statistically significant increase. But the point is, those rates are very high, so it doesn't matter really whether they have changed. They have stayed high and they are much higher than the rate for whites.

I continue to believe that it is based on really two things, perhaps three:

One is education. There is a difference in the educational attainment of these groups. More importantly, perhaps, even those minority citizens who are well educated seem to find jobs in different occupations than whites do. They have a harder time apparently, or they don't go into the law, medicine, or things of that sort. When they are in professional occupations, they seem to be more in the lower paying ones, such as teaching. So that's a problem.

In addition, the minority groups have tended to find jobs in the industries that are being wound down in terms of employment, a lot more blacks in some of the construction and manufacturing.

Representative SOLARZ. I noticed that the increase in the unemployment rate for those of Hispanic origin was substantially greater even than the increase in unemployment for those who are black. What is the explanation for that? Is it that they are concentrated in areas of the economy which are suffering most at the present time?

Mrs. NORWOOD. It's always harder for minority groups to get jobs. I do want to caution that though it seems like a very large increase, that figure bounces up and down a bit, and we really need a couple of more months to be certain of it.

However, given the overall conditions of the labor market, I am sure that they are having greater difficulty than they did before.

Representative SOLARZ. Are you in a position at all to speculate about the impact of sequestration on the unemployment rate?

Mrs. NORWOOD. I'm having all I can do to speculate on the impact of sequestration on the Bureau of Labor Statistics, and I might say that the impact of sequestration would be that you wouldn't have any numbers to worry about because there wouldn't be any. You can't collect them. You can't put them in.

Representative SOLARZ. That may be comforting to the ostrich caucus around here inasmuch as the country will be unable to determine the precise measure of the catastrophe into which they've plunged us. But, nevertheless, while you're still at the table, for example how many Federal workers will be laid off? What will that do to the unemployment rate? Are you able to calculate what the ripple effect would be in other sectors of the economy with an overall cutback of Federal funding?

Mrs. NORWOOD. I certainly can't give you any specific numbers, but it's my understanding that, first of all, a lot of the Federal agencies for some period of time until it became permanent, would be furloughing people temporarily. And if they were on the payrolls at all during the survey period, they would be considered employed by our definition.

So I think that should be considered. There is a large community out there that is dependent in terms of business, and they would be losing jobs. More important I think is that there would be a contraction, I would expect, that would occur in financial markets, and that would have an effect overall across the board on business, but I cannot speculate as to how much.

Representative SOLARZ. Are you saying that if somebody is furloughed, by which I understand it to mean they're told not to report to work because there's no money to pay them—or presumably, if they wanted to work on a volunteer basis they could, but if they're not getting paid and they're not showing up for work—in what sense are they considered employed by your criteria?

Mrs. NORWOOD. That's why I was very careful to say depending on how long that goes on.

If people are furloughed for example 2 or 3 days a week, if they appear 1 day during the week, they're on the payroll and so they're not counted as unemployed. That was my point.

Representative **Solarz**. What have you decided to do in your shop? Would people be laid off for the whole week until such time as this was resolved, if it ever was? Or would you have everybody go 4 days, or 3 days? How are you working that?

Mrs. **Norwood**. We've considered a variety of options. It would cost us money to eliminate people from the payroll because of the rules of seniority and so on, and you'd lose people in one place rather than another place, and you'd have to also pay them certain amounts of money for unemployment compensation and for other kinds of things.

So we are looking at furloughs. I might say that what we're looking at is how to protect our work force as well as we can, because the Bureau of Labor Statistics is a professional agency that depends upon the people who are there, and we don't want them to rush off to find other jobs. It's hard enough to keep the good people we have.

We're looking at furloughs of—I'm not sure how much. It depends on how long this goes on. But we're looking at starting off with a day and then perhaps more. We're cutting all kinds of other things.

Representative **Solarz**. What has been the average duration of the recessions we've had in the post-World War II era? Am I correct in saying that the technical definition of a recession is two quarters of negative growth?

Mrs. **Norwood**. That's a definition. A more technical definition is, as I said to the chairman, the review by the National Bureau of Economic Research of the depth of the reductions, the dispersion of them, and how long they take place.

The average duration of postwar contractions has been about a year. But there have been tremendous variations from one to another.

Representative **Solarz**. What have been?

Mrs. **Norwood**. The specifics? How long? Well, if you go back to 1982, it was about 16 months. The 1980 recession was only 6 months. The 1975 recession was about 16 months, and you go back to 8, 10, 11, it just varied from 8 months, or from 6 months to about 16 months.

Representative **Solarz**. What is the average unemployment rate during these recessions?

Mrs. **Norwood**. I don't have that, but we know that it has gone up to double-digit range.

Mr. **Plewes**. We have the highs here. I can go through them. The 1982 recession it got up to 10.8 percent; in 1980, 7.8 percent; in the 1975 recession, 9 percent; in the 1970 recession, 6.1 percent; the 1961 recession, 7.1 percent; in 1958, 7.5 percent; 1954, 6.1 percent; 1949, 7.9 percent.

Representative **Solarz**. So we can anticipate a fairly sharp increase in unemployment when we move into a recession?

Mrs. **Norwood**. It would appear so.

On the other hand, we are now a much more service-producing economy, and the service-producing sector in the past has been less susceptible than the goods-producing sector. That's what we've been seeing over the last months.

The worrying thing I think right now is that the service-producing sector seems to have become stagnant.

Representative SOLARZ. Is there a significant regional differentiation in the unemployment picture?

Mrs. NORWOOD. Yes, there is a significant difference in the change. The difference in the unemployment rates is not so great, but you have the Northeast, for example, which had a very low-unemployment rate, which has come way up. But its rate is not terribly different from the rates in other sections of the country.

Representative SOLARZ. What was the explanation for the sharp increase in unemployment in the Northeast?

Mrs. NORWOOD. It's basically, I think, an industrial composition question. We have a lot of high-tech industry, for example, and as I indicated in my statement, the electronic equipment industry has had very severe declines. So I think it's largely that.

Do you have more to add to that Mr. Plewes?

Mr. PLEWES. And a slowdown in construction, which was generating a lot of jobs up in the Northeast.

Representative SOLARZ. Why has there been a slowdown in electronics?

Mr. PLEWES. Two reasons we see. First of all, it's connected with the slowdown in defense spending, and that's happened way over the last year and a half.

The second is in the computer industry, both a question of satiation and competition from different areas of the country and overseas.

Representative SOLARZ. Mr. Chairman, thank you very much.

I remember once Mrs. Norwood came on some snowy day and told us that neither rain nor sleet nor snow could stay this courrier from the traditional competiton of her appointed monthly rounds.

Representative HAMILTON. Did she include sequestration? [Laughter.]

Representative SOLARZ. Based on what she's told us, I fear that next month may be the first time in the history of the Bureau that we may not have this monthly hearing.

Mrs. NORWOOD. The thing that is troubling us that we have tried to examine every way we could as to how we can continue to collect data, because if you don't collect them, you can't ever have them, you can't go back and get them after the fact. And that's the big worry we have in our employment and in our price indicators in particular, which are monthly series.

So we'll do our best.

Representative SOLARZ. We will, too. Thank you, Mr. Chairman.

Mrs. NORWOOD. We're counting on you.

Representative HAMILTON. I'm not sure we did last night. We'll try again today.

Thank you, Congressman Solarz.

The labor force growth has slowed quite dramatically, hasn't it?

Mrs. NORWOOD. Yes.

Representative HAMILTON. Why is that happening? Is that strictly a function of birth rates? Why have we had that kind of drop?

Mrs. NORWOOD. A large part of that is teenagers.

Representative SOLARZ. Fewer teenagers?

Mrs. **Norwood**. Yes, just fewer of them were born. On the other hand, the labor force participation rates are not up as much as they have been, and part of that I think may be two things.

One is that more of them may be going on for more education, but more importantly there are not so many jobs in the retail trade industry in particular, where teenagers have found jobs before. And so many of them may be opting not to come into the labor force to look for work.

Representative **Hamilton**. Is a decline in the labor force a trend that is associated with a recession? Is there any relationship between that data and a recession?

Mrs. **Norwood**. Once a recession has been in place for awhile, or an economic downturn, or drops in employment growth for awhile, people often get discouraged and they don't go out looking for jobs because they think there aren't any available. In those cases you do see people dropping out of the labor force and you see an increase in the number of discouraged workers. We are not yet seeing an increase, at least not over the last quarter, in the number of discouraged workers.

Representative **Hamilton**. In the last year, payroll employment rose by 1.7 million, but households reported employment growth of only 479,000. How do you explain the difference in that data?

Mrs. **Norwood**. I think a significant proportion, what, two-thirds of that difference is probably the effect of multiple job holding, and the differences in the definitions of the two surveys.

We recently did a special supplement to the CPS to see what had happened to multiple job holding. We found a tremendous increase in it. In the business survey, people are counted as many times as they appear on a payroll, and therefore if someone has two or three jobs part time, those people are counted two or three times.

In the household survey, that's a person concept, and it doesn't matter how many jobs a person has, we just find out whether that person has been employed at all. Therefore, you would expect some difference between the surveys. This has become much larger than we have ever seen really in the past. And we think that a larger part of it is that increase in multiple job holding.

I think the other part of it is probably the problem of estimating population counts. That involves immigration. The difficulty in coming up with an exact number, which the Census Bureau has to do between censuses, as well as people who are uncounted.

Representative **Hamilton**. What will be the normal labor force growth that you would expect in the year to come?

Mrs. **Norwood**. We are anticipating that labor force growth will be much slower in the future than it has been in the past. Whereas, we were seeing rates of something like 3, 3½ percent in the 1960's because of the baby-boom generation, now we'll probably be seeing about 1½ percent growth.

Representative **Hamilton**. That's based, of course, on the demographic figures.

Mrs. **Norwood**. That's largely demographic. Obviously, that will be affected in the short run by the state of the economy.

Representative **Hamilton**. Now, if you don't have any economic growth, would most of that labor force growth add to unemployment?

Mrs. **Norwood**. If people can't find jobs, surely.

Representative **Hamilton**. You would expect the unemployment rate to go up, right?

Mrs. **Norwood**. If we don't have any job growth, yes, but it won't go up as much as in previous recessions, because we don't have as many people. The birth rates were lower some years ago.

On the other hand, one of the things that I've been rather intrigued with is the fact it seems to me that as people come into the labor force, that also creates jobs. It creates a demand. If there are more people who reach adulthood who go into the labor force, they are consumers of products. You take them away, there is less consumption and, therefore, there is less need to develop. So in some ways it's a kind of circular sort of thing.

Representative **Hamilton**. You can pretty well anticipate the labor force growth in the year ahead; is that correct?

Mrs. **Norwood**. Well, we try and we usually do a fairly good job of that because the demographics are so controlling. But obviously, the state of the economy, which we cannot anticipate very well, will be the controlling factor for the short term.

Over the long term, we are fairly certain that it will average out to about 1½ or so percent a year. But there may be some blips in the movement.

Representative **Hamilton**. If you don't get any growth and you have 1½ million new people coming in, what's that going to do to your employment rate?

Mrs. **Norwood**. Well, it will increase it. I don't know how much.

Mr. **Plewes**. A percent and a half, basically. It's about 1 percent per million.

Representative **Hamilton**. So you'd see a 1½ percent increase if you had flat growth?

Mr. **Plewes**. That's mathematical.

Representative **Hamilton**. The National Bureau of Economic Research that tells us whether or not we have a recession. When do they meet?

Mrs. **Norwood**. They apparently have decided not yet to meet. They've considered it and they've decided there isn't sufficient evidence.

Representative **Hamilton**. They don't meet at regular times, they just meet when they want to?

Mrs. **Norwood**. They have a committee which looks at data and decides when there may be—they poll the members and see whether they think there's enough evidence yet to consider meeting, and they have decided not to meet.

And as you know, the latest reestimate of our gross national product is not negative. For whatever that means, it's not very positive either.

Representative **Hamilton**. Is that a government bureau?

Mrs. **Norwood**. No.

Representative **Hamilton**. That's private, no government funding?

Mrs. **Norwood**. Not that I'm aware of. Not for that purpose. They do studies. It's connected. It's resident in Massachusetts, in Boston. There are people who are professors who do all sorts of studies, and I don't know where they get the funding. From various sources, I suspect. But not this part of it.

Representative HAMILTON. While private-sector employment was falling in September, the average weekly hours were up. What does that mean; what's the significance of that?

Mrs. NORWOOD. For some time now, we have been seeing employers controlling costs by raising hours somewhat, and making the number of people somewhat reduced because it's cheaper for them, given the high cost of fringe benefits.

So I would not be surprised at this stage of what we're seeing in the labor market, to see hours holding up. They are still significantly high. They have gone down slightly in manufacturing, but that's a rather typical pattern, considering what we've been seeing here the last several months and years.

Representative HAMILTON. In the past, firms would cut hours before they'd lay off workers, wouldn't they?

Mrs. NORWOOD. That has not been happening over the last several years. Firms have been cutting workers and extending hours, or keeping hours quite high. We've seen that, particularly in manufacturing.

Representative HAMILTON. Do employers lay off temporary and part-time workers before they lay off full-time workers?

Mrs. NORWOOD. Usually. Usually it's the last hired who will become the first fired. They are also usually therefore the lowest paid, and that means that the average wage may in fact go up during that period.

Representative HAMILTON. Now, we have an increase in the number of people working part time.

Mrs. NORWOOD. We should remember that a significant portion of those people are working part time because that's what they want to do. We have had a significant increase this month in the number of people who are working part time because they can't find full-time jobs. That is the part time for economic reasons that we are always very concerned about. I think that figure bears watching, because a rise in it is not a good sign.

Representative HAMILTON. We have had a long-term decline in the number of young people in the labor force. How much did the decline in the number of young people reduce the unemployment rate, say, in the decade of the 1980's? Can you tell us that?

Mrs. NORWOOD. It's very hard to tell you that with accuracy, because what you have to do is to assume that all other things are equal, and that the fact that there are fewer teenagers doesn't do anything to what's happening to employment of adults. And I don't believe that's true.

If you hold that constant, however, we have had Paul Flaim's work, which was recently published in the Monthly Labor Review. Do you remember what the conclusions of that are, Mr. Plewes?

Mr. PLEWES. Somewhere around a half percent, but I'm not quite sure now.

Mrs. NORWOOD. I do want to emphasize that that's assuming a standardization of the rates, and that it's difficult to get at the interaction of facts, but we try. And it's a good piece of work.

Representative HAMILTON. The figures that I have here are that the unemployment rate in 1979 was 5.8 percent. In 1989 it was 5.3

percent, and what I was trying to get at is how much of that decline is due to the decline in the number of young people coming into the labor force.

Mrs. **Norwood**. Well, a goodly portion of it. A lot of it.

Representative **Hamilton**. I think that's pretty well got it for this morning. We'll conclude.

Thank you very much.

[Whereupon, at 10:20 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, NOVEMBER 2, 1990

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The committee met, pursuant to notice, at 9:35 a.m., in room 2359, Rayburn House Office Building, Hon. Stephen J. Solarz (member of the committee) presiding.

Present: Representatives Solarz and Hawkins.

Also present: William Buechner, professional staff member.

OPENING STATEMENT OF REPRESENTATIVE SOLARZ, PRESIDING

Representative SOLARZ. The committee will come to order. On behalf of the Joint Economic Committee, I'm very pleased to welcome Janet Norwood, Commissioner of the Bureau of Labor Statistics before the committee this morning. Commissioner Norwood and her colleagues are here to testify on the employment and unemployment situation for October. This is a regular, routine appearance every month. You can set your clock by it. Neither rain nor snow nor sleet has stayed this messenger from the swift completion of her appointed rounds. And so we are particularly pleased to have her with us this morning.

During the past few months, as the economy has weakened and the unemployment rate has risen from 5.3 percent to 5.7 percent, there has been a growing interest in what Commissioner Norwood has to say at these hearings. Americans are worried about the prospect of a recession. I have just come from my constituency in Brooklyn. And I can tell you that all over New York one is hearing horror stories about the slack in the economy, the loss of income, the plummeting value of real estate. And I think the anxiety level, not only of my constituents, but of the American people, is rapidly rising.

We all know that recessions cost jobs. A million and a half jobs were lost in the last recession in 1981 and 1982. And right now we are coming off a year in which the number of jobs in manufacturing has already declined by 350,000. Two-thirds of the job losers in the last year were white-collar workers, middle managers, technical workers, professionals who are having a difficult time finding new jobs. Many of the rest are highly skilled craftsmen in factories and construction. These skills are needed to keep our economy competitive.

The country is watching your data very closely today, Commissioner Norwood, for information on the current direction of the economy and the security of their jobs. The Joint Economic Committee welcomes you, Commissioner. And we will now let you deliver your remarks on the employment and unemployment situation for October.

Before you do, however, I want to say that this is an historic occasion representing, as it does, the last congressional hearing in which one of the most distinguished members ever to serve in the House of Representatives will be participating. Today will mark the culmination of a 28-year career as a Member of the House of Representatives of the very distinguished gentleman from California, Mr. Hawkins. Actually, he will remain a Member of the House through the end of the year. But I believe this will be the last of countless hearings in which he has participated.

In over close to three decades of service in the House, he has had an enormous impact on the lives of millions of working men and women in our country. He has been an inspiration to his colleagues. I was privileged to serve under his skilled leadership on the House Education and Labor Committee for several years. He was always a gentleman. Even those who disagreed with him never found him disagreeable. He was, in many respects, the conscience of the Congress. I believe that all Americans are in his debt. And I think that it is characteristic of Mr. Hawkins that even though he is going to be leaving the Congress, he is to be found here on duty ever vigilant, prepared to contribute his wisdom, his experience, his values to the congressional process.

Douglas MacArthur, in his farewell address to the joint session of Congress said, "Old soldiers never die. They just fade away." I suspect that Congressmen are a little different. Mr. Hawkins, like former generals, will never die. But he is not going to fade away. He is going to be heard from. He is going to remain involved. And I am confident that those of us who have benefited from his experience, from his wisdom, from his insights, will be able to call upon him in the future as we have in the past.

So, Gus. I really want to tell you what a great privilege it is to serve with you, my friend. And I hope we will be seeing more of each other in the future.

Mrs. Norwood, on that note, I trust that Congressman Hawkins is not going to be among the increasing number of unemployed in the country. You can perhaps let us know if you factored that into your analysis.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS; AND THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS

Mrs. Norwood. Let me say, Congressman Solarz, how much we at the Bureau of Labor Statistics appreciate the help and more importantly the wisdom that Congressman Hawkins has provided in many of the areas in which we work. He has continually supported the need for high-quality, accurate data that is totally objective, so that we in this country can have the kind of information that is needed to make and evaluate policy. And I am very grateful, personally, for the support that he has provided. And we, as an institution, are very indebted to you, sir, for the support, the help, and the understanding, as well as the wisdom that you have given to us.

I am here to present some comments on the data for October that we released this morning. I have with me on my right Kenneth Dalton, who heads our Price Office. And on my left is Thomas Plewes, who heads our Office of Employment and Unemployment. And we are very grateful for this opportunity.

The October job figures provide further evidence of deterioration in the labor market. Particularly large job cutbacks occurred in construction and manufacturing, and there was weakness in the service sector as well. For the third month in a row, more industries lost jobs than gained them. In addition, cutbacks occurred both in the overall average workweek and in the factory workweek.

Despite the broad job losses in October, the Nation's unemployment rate remained at 5.7 percent, after rising by half a percentage point between June and September. The labor force, which has shown little growth over the past year, declined in October.

The business survey continues to point to a worsening employment picture. If we exclude the effects of the Census Bureau's curtailment of temporary workers in recent months, payroll job movements have weakened each month since June. Over this period, the number of payroll jobs has shown no net gain, as sizable losses in the goods industries have been barely offset by gains in the service sector. Indeed, even the usually robust service sector has lost much of its vitality during this period.

Manufacturing and construction employment again bore the brunt of the over-the-month job reductions. The number of factory jobs fell by 60,000 in October and is down by 175,000 over the past 3 months alone. Since the January 1989 peak in factory employment, 580,000 jobs, or 3 percent of the total number of factory jobs, have been lost.

Over-the-month declines were widespread among both durable and nondurable goods industries, with the largest cutbacks in fabricated metal products, electronic equipment, transportation equipment, textiles, and apparel. Smaller losses occurred in lumber and wood products, furniture and fixtures, rubber and plastics, and leather products. Most of these industries have suffered substantial job losses over the past year or so.

Employment in construction, which has been declining steadily since last spring, fell by 80,000 in October, as heavy layoffs occurred throughout the industry. Employment cutbacks in the industry have totaled 165,000 since June. During that period, the unemployment rate for construction workers has increased from 9.7 to 13.2 percent.

Within the service-producing sector, retail trade employment declined by some 50,000 jobs in October, after seasonal adjustment. Job losses were widespread. Department store hiring for the upcoming Christmas period fell short of seasonal expectations, and employment was down by 15,000, after seasonal adjustment. Job cutbacks in department stores have totaled about 80,000 since the May 1989 peak employment level.

Some over-the-month job gains did occur elsewhere in the services sector. Employment in the services industry itself rose by 95,000; about two-thirds of this increase was in health services, which has been showing extremely strong job growth this year. This industry comprises 12 percent of private service-sector employment but has accounted for 39 percent of the past year's employment growth in private service-sector jobs.

Despite the over-the-month increase in private service employment, job growth in the sector has slowed substantially from the strong pace of recent years. Over the past 12-month period, employment in this sector grew by 2.4 percent, compared with growth rates of 3.3 and 4 percent in the prior two 12-month periods.

The household survey showed a small labor force decline in October as employment edged down and no change occurred in unemployment. The labor force has, in fact, grown very slowly over the past year—by 600,000 persons—only about one-third of the pace of the past few years. This slower labor force growth has reduced the upward pressure on the unemployment rate in this otherwise soft labor market.

As fewer people enter the labor market, the proportion of the population that is employed—as measured by the employment-population ratio—has begun to trend downward in recent months. Since June, the ratio has declined from 63 to 62.4 percent. Over the same period, the ratio for adult women has dropped from 55.5 to 54.8 percent, while the ratio for adult men has fallen from 74.2 to 73.8 percent.

In summary, the data released this morning show that the employment situation continued to deteriorate in October. Employment declined substantially in manufacturing and construction, and weekly hours were reduced. Although the unemployment rate was unchanged over the month, it is up half a percentage point in just the last 4 months.

Congressman Solarz, there has been a great deal of discussion in terms of the trends of energy prices. We have been analyzing their effect on the price indexes. I would like to make a few points about that.

Consumer prices have risen at an annual rate of 6.6 percent in the first 9 months of this year, a rate that is about 2 percentage points higher than for all of last year. Changes in the price of energy, especially prices for gasoline and fuel oil, have dominated this acceleration. Energy prices surged during the first quarter and then even more in the third quarter following the Middle East crisis.

Through the month of September, energy prices rose at an annual rate of just over 17 percent. The direct effect of the sharp increases in gasoline and fuel oil during August and September accounted for nearly half of the 1.5 percent increase in the CPI-U for those months.

There seems to be some evidence in the press that gasoline prices have continued to rise in October. If so, we certainly will see their effect in the CPI for October, which will be released in 2 weeks. But it is important to remember that our price measures will be affected by the indirect as well as the direct effects of energy price increases. Some evidence—for example, higher airfares—has already begun to show up in the index. Based on past experience, we would expect that as the increased energy prices pass through the economy, the resulting secondary effects for the recent price increases could be as large as the initial effects.

Now, Congressman Solarz, we would all be very happy to try to answer any questions you have.

Representative **Solarz**. Thank you, Mrs. Norwood.

[The table attached to Mrs. Norwood's statement, together with the Employment Situation press release, follows:]

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unad-justed rate	X-11 ARIMA method							X-11 method (official method before 1980)	Range (cols. 2-9)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual	12-month extrapola-tion		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1989										
October.....	5.0	5.3	5.3	5.2	5.3	5.3	5.3	5.3	5.3	.1
November....	5.2	5.3	5.3	5.3	5.4	5.4	5.4	5.3	5.4	.1
December....	5.1	5.3	5.3	5.3	5.3	5.4	5.4	5.3	5.4	.1
1990										
January.....	5.9	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
February....	5.8	5.3	5.3	5.3	5.3	5.3	5.2	5.3	5.3	.1
March.......	5.4	5.2	5.2	5.3	5.2	5.2	5.1	5.2	5.2	.2
April.......	5.2	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	-
May.........	5.1	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.2	.1
June........	5.3	5.2	5.2	5.2	5.1	5.2	5.2	5.2	5.1	.1
July........	5.5	5.5	5.4	5.4	5.4	5.4	5.5	5.5	5.5	.1
August......	5.4	5.6	5.6	5.6	5.6	5.6	5.5	5.6	5.6	.1
September...	5.5	5.7	5.6	5.6	5.7	5.7	5.6	5.7	5.7	.1
October.....	5.4	5.7	5.6	5.6	5.7	5.7	5.7	5.7	5.7	.1

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
November 1990

(1) *Unadjusted rate*. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) *Official procedure (X-11 ARIMA method)*. The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components—agricultural employment, nonagricultural employment and unemployment—for 4 age-sex groups—males and females, ages 16-19 and 20 years and over—are seasonally adjusted independently using data from January 1974 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of *Employment and Earnings*.

(3) *Concurrent (as first computed, X-11 ARIMA method)*. The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1984 would be based, during 1984, on the adjustment of data from the period January 1974 through January 1984.

(4) *Concurrent (revised, X-11 ARIMA method)*. The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) *Stable (X-11 ARIMA method)*. Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) *Total (X-11 ARIMA method)*. This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) *Residual (X-11 ARIMA method)*. This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) *12-month extrapolation (X-11 ARIMA method)*. This approach is the same as the official procedure except that the factors are extrapolated in 12-month intervals. The factors for January-December of the current year are computed at the beginning of the year based on data through the preceding year. The values for January through June of the current year are the same as the official values since they reflect the same factors.

(9) *X-11 method (official method before 1980)*. The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in *The X-11 ARIMA Seasonal Adjustment Method*, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in *X-11 Variant of the Census Method II Seasonal Adjustment Program*, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

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THE EMPLOYMENT SITUATION: OCTOBER 1990

The nation's job market showed further weakness in October, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. Nonfarm payroll employment fell slightly, as large job losses in construction and manufacturing were only partly offset by gains in the services industry. The civilian worker unemployment rate held steady at 5.7 percent.

Unemployment (Household Survey Data)

After inching upward since June, both the number of unemployed, 7.1 million, and the civilian worker unemployment rate, 5.7 percent, were unchanged in October. The unemployment rate for all of the major worker groups—adult men (5.1 percent), adult women (4.9 percent), teenagers (16.2 percent), whites (4.9 percent), blacks (11.8 percent), and Hispanics (8.1 percent)—were little changed or unchanged in October. (See tables A-2 and A-3.)

The proportion of the unemployed who lost their last jobs was about unchanged in October. At 3.5 million, the number of job losers was about 400,000 higher than the June level. The number of persons working part time who would prefer full-time work (workers on part time for economic reasons) also was little changed in October but has risen by 450,000 since June. (See tables A-4 and A-8.)

Civilian Employment and the Labor Force (Household Survey Data)

Total civilian employment edged down to 117.7 million in October. Employment had risen by 500,000 during the first half of the year but since then has dropped by nearly 700,000. The proportion of the working-age population that is employed (the employment-population ratio) was 62.4 percent in October. That measure had hovered around 63.0 percent during all of 1989 and the first half of 1990. (See table A-2.)

The civilian labor force, at 124.8 million, has shown no growth since spring, although the working-age population has continued to increase. As a result, the labor force participation rate has begun to inch down. Most of this declining participation has occurred among teenagers, but even the rate for adult women, which had been on a long upward trend, has been edging down in recent months. (See table A-2.)

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			Sept.-Oct. change
	1990		1990			
	II	III	Aug.	Sept.	Oct.	
HOUSEHOLD DATA	Thousands of persons					
Labor force 1/........	126,550	126,421	126,300	126,568	126,354	-214
Total employment 1/.	119,927	119,459	119,298	119,499	119,281	-218
Civilian labor force..	124,908	124,798	124,660	124,967	124,784	-183
Civilian employment.	118,285	117,836	117,658	117,898	117,711	-187
Unemployment........	6,623	6,962	7,003	7,069	7,073	4
Not in labor force....	62,916	63,468	63,601	63,434	63,741	307
Discouraged workers.	893	835	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/......	5.2	5.5	5.5	5.6	5.6	.0
All civilian workers	5.3	5.6	5.6	5.7	5.7	.0
Adult men.........	4.8	5.0	5.0	5.1	5.1	.0
Adult women.......	4.6	4.8	4.9	5.0	4.9	-0.1
Teenagers.........	14.8	16.2	16.7	15.5	16.2	.7
White.............	4.6	4.8	4.8	4.8	4.9	.1
Black.............	10.4	11.7	11.8	12.1	11.8	-.3
Hispanic origin...	7.6	8.1	7.8	8.7	8.1	-.6
ESTABLISHMENT DATA	Thousands of jobs					
Nonfarm employment....	110,541	p110,638	110,613	p110,561	p110,493	p-68
Goods-producing.....	25,178	p25,018	25,013	p24,936	p24,794	p-142
Service-producing...	85,363	p85,620	85,600	p85,625	p85,699	p74
	Hours of work					
Average weekly hours:						
Total private.......	34.6	p34.6	34.5	p34.7	p34.2	p-0.5
Manufacturing.......	40.9	p41.0	41.0	p41.1	p40.8	p-.3
Overtime..........	3.7	p3.7	3.8	p3.7	p3.7	p.0

1/ Includes the resident Armed Forces. p=preliminary.
N.A.=not available.

Industry Payroll Employment (Establishment Survey Data)

Nonfarm payroll employment signaled continued weakness in October, as substantial job losses in construction, manufacturing, and retail trade more than offset gains in services and state and local government. Total payroll employment edged down by 70,000 over the month, and, unlike recent months, temporary census workers accounted for a very small portion of that decrease. (See table B-1.)

Construction lost the most jobs in October, with a decline of 80,000 that was widespread throughout the industry. With building activity having slowed considerably, the industry has had decreases of 185,000 jobs over the last 5 months. Employment in mining was little changed over the month, despite a small increase in oil and gas extraction.

In manufacturing, employment declined by 60,000 in October, continuing a downward trend which has seen the number of jobs in the nation's factories drop by 175,000 in the last 3 months and by 580,000 since the peak level in January 1989. Durable goods industries have borne the brunt of these job losses, with widespread employment declines in October including losses in electronic equipment, fabricated metals, transportation equipment, lumber, and furniture. Reductions also occurred in several of the nondurable goods industries, including textiles, apparel, rubber and plastics, and leather.

In the service-producing sector, retail trade experienced a drop of 50,000 in October, following 2 months of smaller declines. Wholesale trade decreased by 10,000, as the problems in manufacturing and construction continue to affect adversely employment among the distributors of goods. The durable goods component of wholesale trade has lost 25,000 jobs since June.

Elsewhere in the service sector, the services industry itself added 95,000 jobs in October. As has been the case in recent months, health services accounted for most of this gain, but there were also increases in several other services industries in October, including social services and private education. Employment in business services edged down; this industry has shown no clear employment trend since May. Employment in state and local government rose over the month, mainly in education.

Weekly Hours (Establishment Survey Data)

The average workweek for production or nonsupervisory workers on private nonfarm payrolls fell by half an hour in October to 34.2 hours, seasonally adjusted. The decline in hours was widespread across industries. In manufacturing, the workweek declined by 0.3 hour to 40.8 hours, while overtime was unchanged at 3.7 hours. (See table B-2.)

Declines in both employment and the workweek resulted in steep declines in the indexes of aggregate weekly hours. The index for private production or nonsupervisory workers declined by 1.6 percent to 123.3 (1982=100) in October, seasonally adjusted. The construction index fell 5.6 percent to 132.4, and the index for manufacturing, at 106.8, was down about 1.0 percent over the month and 2.2 percent over the past year. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls were unchanged in October at $10.17. Average weekly earnings, however, were down 1.4 percent, seasonally adjusted, as a result of the sharp drop in weekly hours. Prior to seasonal adjustment, average weekly earnings decreased $4.07 to $349.85. Over the year, average hourly earnings rose 3.7 percent and average weekly earnings were up 2.5 percent. (See tables B-3 and B-4.)

The Employment Situation for November 1990 will be released on Friday, December 7, at 8:30 A.M. (EST).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 60,000 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonfarm payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes over 340,000 establishments employing over 40 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonfarm firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. For the establishment survey, updated factors for seasonal adjustment are also calculated twice a year. In both surveys, revisions to historical data are made once a year.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 358,000; for total unemployment it is 224,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .25 percentage point; for teenagers, it is 1.29 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $8.50 per issue or $25.00 per year from the U.S. Government Printing Office, Washington, D.C., 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	Oct. 1989	Sept. 1990	Oct. 1990	Oct. 1989	June 1990	July 1990	Aug. 1990	Sept. 1990	Oct. 1990
TOTAL									
Noninstitutional population[1]	188,580	190,002	190,095	188,580	189,607	189,763	189,901	190,002	190,095
Labor force[2]	126,125	126,380	126,590	125,857	126,466	126,394	126,300	126,568	126,354
Participation rate[3]	66.9	66.5	66.6	66.7	66.7	66.6	66.5	66.6	66.5
Total employed[2]	119,903	119,562	119,868	119,294	120,019	119,580	119,298	119,499	119,281
Employment-population ratio[4]	63.6	62.9	63.1	63.3	63.3	63.0	62.8	62.9	62.7
Resident Armed Forces	1,709	1,601	1,570	1,709	1,630	1,627	1,640	1,601	1,570
Civilian employed	118,194	117,961	118,298	117,585	118,389	117,953	117,658	117,898	117,711
Agriculture	3,309	3,289	3,280	3,197	3,348	3,086	3,137	3,181	3,167
Nonagricultural industries	114,885	114,672	115,018	114,388	115,041	114,867	114,521	114,717	114,545
Unemployed	6,222	6,818	6,722	6,563	6,447	6,814	7,003	7,069	7,073
Unemployment rate[5]	4.9	5.4	5.3	5.2	5.1	5.4	5.5	5.6	5.6
Not in labor force	62,455	63,622	63,505	62,723	63,141	63,369	63,601	63,434	63,741
Men, 16 years and over									
Noninstitutional population[1]	90,535	91,271	91,299	90,535	91,087	91,168	91,240	91,271	91,299
Labor force[2]	69,461	69,569	69,610	69,599	69,599	69,544	69,459	69,810	69,780
Participation rate[3]	76.7	76.2	76.2	76.9	76.4	76.3	76.1	76.5	76.4
Total employed[2]	66,217	66,053	66,010	66,046	66,000	65,740	65,596	65,867	65,862
Employment-population ratio[4]	73.1	72.4	72.3	73.0	72.5	72.1	71.9	72.2	72.1
Resident Armed Forces	1,533	1,441	1,414	1,533	1,465	1,462	1,475	1,441	1,414
Civilian employed	64,684	64,612	64,596	64,513	64,535	64,278	64,121	64,426	64,448
Unemployed	3,243	3,516	3,600	3,553	3,599	3,804	3,863	3,943	3,918
Unemployment rate[5]	4.7	5.1	5.2	5.1	5.2	5.5	5.6	5.6	5.6
Women, 16 years and over									
Noninstitutional population[1]	98,045	98,731	98,796	98,045	98,520	98,595	98,661	98,731	98,796
Labor force[2]	56,664	56,811	56,980	56,258	56,867	56,849	56,842	56,758	56,575
Participation rate[3]	57.8	57.5	57.7	57.4	57.7	57.7	57.6	57.5	57.3
Total employed[2]	53,685	53,510	53,858	53,248	54,019	53,839	53,702	53,632	53,419
Employment-population ratio[4]	54.8	54.2	54.5	54.3	54.8	54.6	54.4	54.3	54.1
Resident Armed Forces	176	160	156	176	165	165	165	160	156
Civilian employed	53,509	53,350	53,702	53,072	53,854	53,674	53,537	53,472	53,263
Unemployed	2,979	3,302	3,122	3,010	2,848	3,010	3,140	3,126	3,156
Unemployment rate[5]	5.3	5.8	5.5	5.4	5.0	5.3	5.5	5.5	5.6

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[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted[1]					
	Oct. 1989	Sept. 1990	Oct. 1990	Oct. 1989	June 1990	July 1990	Aug. 1990	Sept. 1990	Oct. 1990
TOTAL									
Civilian noninstitutional population	186,871	188,401	188,525	186,871	187,977	188,136	188,261	188,401	188,525
Civilian labor force	124,416	124,779	125,020	124,148	124,836	124,767	124,660	124,967	124,784
Participation rate	66.6	66.2	66.3	66.4	66.4	66.3	66.2	66.3	66.2
Employed	118,194	117,961	118,298	117,585	118,389	117,953	117,658	117,898	117,711
Employment-population ratio[2]	63.2	62.6	62.7	62.9	63.0	62.7	62.5	62.6	62.4
Unemployed	6,222	6,818	6,722	6,563	6,447	6,814	7,003	7,069	7,073
Unemployment rate	5.0	5.5	5.4	5.3	5.2	5.5	5.6	5.7	5.7
Men, 20 years and over									
Civilian noninstitutional population	81,905	82,940	83,013	81,905	82,676	82,790	82,862	82,940	83,013
Civilian labor force	63,973	64,576	64,593	63,918	64,364	64,344	64,362	64,573	64,558
Participation rate	78.1	77.9	77.8	78.0	77.9	77.7	77.7	77.9	77.8
Employed	61,367	61,651	61,606	61,026	61,345	61,196	61,143	61,264	61,270
Employment-population ratio[2]	74.9	74.3	74.2	74.5	74.2	73.9	73.8	73.9	73.8
Agriculture	2,401	2,387	2,371	2,304	2,400	2,262	2,246	2,296	2,271
Nonagricultural industries	58,966	59,264	59,235	58,722	58,945	58,934	58,897	58,968	58,999
Unemployed	2,606	2,925	2,987	2,892	3,019	3,148	3,219	3,309	3,288
Unemployment rate	4.1	4.5	4.6	4.5	4.7	4.9	5.0	5.1	5.1
Women, 20 years and over									
Civilian noninstitutional population	90,860	91,766	91,857	90,860	91,496	91,581	91,688	91,766	91,857
Civilian labor force	52,839	53,322	53,533	52,281	53,174	53,211	53,316	53,121	52,983
Participation rate	58.2	58.1	58.3	57.5	58.1	58.1	58.1	57.9	57.7
Employed	50,345	50,531	50,915	49,796	50,776	50,719	50,700	50,489	50,370
Employment-population ratio[2]	55.4	55.1	55.4	54.8	55.5	55.4	55.3	55.0	54.8
Agriculture	695	661	666	641	700	583	609	619	619
Nonagricultural industries	49,650	49,870	50,249	49,155	50,077	50,136	50,090	49,870	49,752
Unemployed	2,494	2,790	2,618	2,485	2,398	2,492	2,616	2,632	2,613
Unemployment rate	4.7	5.2	4.9	4.8	4.5	4.7	4.9	5.0	4.9
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,107	13,695	13,655	14,107	13,805	13,764	13,711	13,695	13,655
Civilian labor force	7,603	6,882	6,895	7,949	7,298	7,212	6,983	7,272	7,243
Participation rate	53.9	50.2	50.5	56.3	52.9	52.4	50.9	53.1	53.0
Employed	6,481	5,779	5,777	6,763	6,268	6,038	5,815	6,144	6,071
Employment-population ratio[2]	45.9	42.2	42.3	47.9	45.4	43.9	42.4	44.9	44.5
Agriculture	221	242	243	252	249	239	251	266	277
Nonagricultural industries	6,260	5,537	5,534	6,511	6,019	5,799	5,564	5,878	5,794
Unemployed	1,122	1,103	1,117	1,186	1,030	1,174	1,168	1,128	1,172
Unemployment rate	14.8	16.0	16.2	14.9	14.1	16.3	16.7	15.5	16.2

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[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Oct. 1989	Sept. 1990	Oct. 1990	Oct. 1989	June 1990	July 1990	Aug. 1990	Sept. 1990	Oct. 1990
WHITE									
Civilian noninstitutional population	159,644	160,640	160,717	159,644	160,365	160,468	160,560	160,640	160,717
Civilian labor force	106,780	107,261	107,362	106,618	107,273	107,230	107,135	107,461	107,238
Participation rate	66.9	66.8	66.8	66.8	66.9	66.8	66.7	66.9	66.7
Employed	102,291	102,277	102,452	101,862	102,461	102,360	101,948	102,281	102,013
Employment-population ratio[2]	64.1	63.7	63.7	63.8	63.9	63.7	63.5	63.7	63.5
Unemployed	4,489	4,984	4,910	4,756	4,812	4,870	5,187	5,180	5,225
Unemployment rate	4.2	4.6	4.6	4.5	4.5	4.5	4.8	4.8	4.9
Men, 20 years and over									
Civilian labor force	55,659	56,115	56,119	55,626	55,932	55,895	56,035	56,144	56,111
Participation rate	78.5	78.3	78.2	78.5	78.3	78.1	78.3	78.4	78.3
Employed	53,735	53,990	53,900	53,483	53,650	53,576	53,613	53,721	53,632
Employment-population ratio[2]	75.8	75.4	75.2	75.5	75.1	74.9	74.9	75.0	74.8
Unemployed	1,924	2,125	2,219	2,143	2,282	2,318	2,423	2,423	2,479
Unemployment rate	3.5	3.8	4.0	3.9	4.1	4.1	4.3	4.3	4.4
Women, 20 years and over									
Civilian labor force	44,637	45,166	45,302	44,207	45,055	45,120	45,100	45,000	44,888
Participation rate	57.7	57.9	58.0	57.1	57.9	57.9	57.9	57.7	57.5
Employed	42,876	43,155	43,441	42,437	43,292	43,321	43,227	43,112	43,011
Employment-population ratio[2]	55.4	55.3	55.7	54.9	55.6	55.6	55.5	55.3	55.1
Unemployed	1,761	2,011	1,862	1,770	1,763	1,799	1,873	1,888	1,877
Unemployment rate	3.9	4.5	4.1	4.0	3.9	4.0	4.2	4.2	4.2
Both sexes, 16 to 19 years									
Civilian labor force	6,484	5,979	5,941	6,785	6,286	6,216	5,999	6,306	6,239
Participation rate	56.8	54.3	54.2	59.4	56.6	56.1	54.3	57.3	56.9
Employed	5,680	5,132	5,111	5,942	5,519	5,363	5,128	5,427	5,370
Employment-population ratio[2]	49.7	46.6	46.6	52.0	49.7	48.4	46.4	49.3	49.0
Unemployed	804	847	829	843	767	853	871	879	869
Unemployment rate	12.4	14.2	14.0	12.4	12.2	13.7	14.5	13.9	13.9
Men	13.9	15.0	15.0	13.8	12.8	15.1	15.7	15.3	14.8
Women	10.8	13.3	12.8	10.9	11.4	12.3	13.2	12.5	13.0
BLACK									
Civilian noninstitutional population	21,108	21,361	21,383	21,108	21,299	21,318	21,337	21,361	21,383
Civilian labor force	13,504	13,425	13,497	13,507	13,472	13,379	13,356	13,470	13,483
Participation rate	64.0	62.8	63.1	64.0	63.3	62.8	62.6	63.1	63.1
Employed	11,988	11,855	11,957	11,923	12,064	11,870	11,781	11,839	11,903
Employment-population ratio[2]	56.8	55.5	55.9	56.5	56.7	55.7	55.3	55.4	55.7
Unemployed	1,516	1,569	1,539	1,584	1,407	1,510	1,575	1,631	1,580
Unemployment rate	11.2	11.7	11.4	11.7	10.4	11.3	11.8	12.1	11.8
Men, 20 years and over									
Civilian labor force	6,218	6,332	6,338	6,234	6,283	6,293	6,235	6,330	6,351
Participation rate	74.1	74.1	74.1	74.2	74.0	73.9	73.1	74.1	74.3
Employed	5,630	5,658	5,670	5,593	5,702	5,617	5,572	5,580	5,631
Employment-population ratio[2]	67.1	66.3	66.3	66.6	67.1	65.9	65.4	65.3	65.8
Unemployed	588	674	668	641	581	676	663	750	721
Unemployment rate	9.5	10.6	10.5	10.3	9.4	10.7	10.6	11.8	11.3
Women, 20 years and over									
Civilian labor force	6,401	6,362	6,389	6,336	6,377	6,328	6,358	6,361	6,335
Participation rate	60.8	59.5	59.7	60.2	59.9	59.4	59.8	59.5	59.2
Employed	5,759	5,682	5,762	5,706	5,812	5,735	5,730	5,705	5,722
Employment-population ratio[2]	54.7	53.2	53.8	54.2	54.6	53.8	53.7	53.4	53.5
Unemployed	642	680	626	630	565	592	628	656	613
Unemployment rate	10.0	10.7	9.8	9.9	8.9	9.4	9.9	10.3	9.7
Both sexes, 16 to 19 years									
Civilian labor force	885	731	768	937	802	758	773	779	807
Participation rate	40.6	34.2	36.1	43.0	37.4	35.4	36.1	36.5	37.9
Employed	598	515	526	624	550	517	489	554	550
Employment-population ratio[2]	27.4	24.1	24.7	28.6	25.6	24.1	22.8	25.9	25.8
Unemployed	287	215	243	313	252	241	284	225	257
Unemployment rate	32.4	29.5	31.6	33.4	31.4	31.8	36.7	28.9	31.8
Men	32.2	30.5	31.0	32.0	37.4	32.3	38.4	30.6	30.7
Women	32.6	28.4	32.2	34.9	25.3	31.2	35.0	26.9	33.1

See footnotes at end of table.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin—Continued

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Oct. 1989	Sept. 1990	Oct. 1990	Oct. 1989	June 1990	July 1990	Aug. 1990	Sept. 1990	Oct. 1990
HISPANIC ORIGIN									
Civilian noninstitutional population	13,936	14,396	14,435	13,936	14,277	14,317	14,356	14,396	14,435
Civilian labor force	9,333	9,629	9,553	9,339	9,651	9,665	9,707	9,643	9,557
Participation rate	67.0	66.9	66.2	67.0	67.6	67.5	67.6	67.0	66.2
Employed	8,631	8,852	8,818	8,595	8,967	8,899	8,951	8,808	8,783
Employment-population ratio[2]	61.9	61.5	61.1	61.7	62.8	62.2	62.3	61.2	60.8
Unemployed	702	777	735	744	684	767	757	835	774
Unemployment rate	7.5	8.1	7.7	8.0	7.1	7.9	7.8	8.7	8.1

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[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

(In thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	Oct. 1989	Sept. 1990	Oct. 1990	Oct. 1989	June 1990	July 1990	Aug. 1990	Sept. 1990	Oct. 1990
CHARACTERISTIC									
Civilian employed, 16 years and over	118,194	117,961	118,299	117,585	118,389	117,953	117,658	117,898	117,711
Married men, spouse present	41,142	41,083	41,156	40,839	40,554	40,545	40,804	40,919	40,870
Married women, spouse present	29,947	29,869	30,159	29,544	29,856	29,809	29,949	29,780	29,772
Women who maintain families	6,399	6,350	6,399	6,354	6,467	6,380	6,385	6,382	6,342
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,707	1,822	1,790	1,679	1,885	1,829	1,886	1,808	1,743
Self-employed workers	1,481	1,364	1,386	1,406	1,507	1,377	1,357	1,275	1,330
Unpaid family workers	120	103	94	124	106	96	93	112	96
Nonagricultural industries:									
Wage and salary workers	105,830	106,612	105,734	105,504	105,985	105,885	105,691	105,800	105,537
Government	17,846	17,467	17,944	17,595	17,863	17,798	17,842	17,555	17,679
Private industries	87,984	88,146	87,790	87,909	88,121	88,087	87,849	88,245	87,858
Private households	1,001	1,026	1,030	987	1,076	979	1,033	1,074	1,005
Other industries	86,983	87,120	86,760	86,922	87,045	87,108	86,816	87,171	86,853
Self-employed workers	8,784	8,810	9,049	8,610	8,756	8,709	8,628	8,810	8,880
Unpaid family workers	271	250	236	280	226	269	229	235	242
PERSONS AT WORK PART TIME									
All industries:									
Part time for economic reasons	4,435	4,941	5,052	4,767	5,013	4,870	5,036	5,365	5,462
Slack work	2,240	2,396	2,522	2,314	2,489	2,595	2,424	2,854	2,627
Could only find part-time work	1,805	2,245	2,172	2,082	2,224	2,070	2,123	2,462	2,403
Voluntary part time	16,313	15,482	16,042	15,368	15,125	15,311	15,377	15,283	15,106
Nonagricultural industries:									
Part time for economic reasons	4,216	4,660	4,788	4,526	4,734	4,710	4,780	5,080	5,182
Slack work	2,084	2,203	2,324	2,166	2,284	2,408	2,242	2,481	2,436
Could only find part-time work	1,851	2,157	2,114	2,021	2,141	2,048	2,069	2,386	2,303
Voluntary part time	15,876	15,036	15,628	14,936	14,627	14,822	14,899	14,858	14,698

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[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1989		1990			1990		
	III	IV	I	II	III	Aug.	Sept.	Oct.
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.1	1.1	1.1	1.1	1.3	1.3	1.3	1.3
U-2 Job losers as a percent of the civilian labor force	2.4	2.5	2.5	2.5	2.7	2.7	2.8	2.8
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force for persons 25 years and over	4.0	4.1	4.2	4.1	4.4	4.4	4.5	4.4
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	5.0	5.0	4.9	5.0	5.2	5.2	5.4	5.5
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	5.2	5.3	5.2	5.2	5.5	5.5	5.6	5.6
U-5b Total unemployed as a percent of the civilian labor force	5.3	5.3	5.2	5.3	5.6	5.6	5.7	5.7
U-6 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons as a percent of the civilian labor force less 1/2 of the part-time labor force	7.2	7.2	7.2	7.3	7.6	7.6	7.8	7.9
U-7 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less 1/2 of the part-time labor force	7.8	7.9	7.8	8.0	8.3	N.A.	N.A.	N.A.

N.A. = not available.

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Oct. 1989	Sept. 1990	Oct. 1990	Oct. 1989	June 1990	July 1990	Aug. 1990	Sept. 1990	Oct. 1990
CHARACTERISTIC									
Total, 16 years and over	6,583	7,069	7,073	5.3	5.2	5.5	5.6	5.7	5.7
Men, 16 years and over	3,553	3,943	3,918	5.2	5.3	5.6	5.7	5.8	5.7
Men, 20 years and over	2,882	3,309	3,289	4.5	4.7	4.9	5.0	5.1	5.1
Women, 16 years and over	3,010	3,126	3,156	5.4	5.0	5.3	5.5	5.5	5.6
Women, 20 years and over	2,486	2,632	2,613	4.8	4.5	4.7	4.9	5.0	4.9
Both sexes, 16 to 19 years	1,186	1,129	1,172	14.9	14.1	16.3	16.7	15.5	16.2
Married men, spouse present	1,270	1,482	1,482	3.0	3.2	3.3	3.5	3.4	3.5
Married women, spouse present	1,208	1,231	1,209	3.9	3.7	3.5	3.9	4.0	3.9
Women who maintain families	526	626	581	7.8	8.0	8.5	8.5	8.9	8.5
Full-time workers	5,231	5,780	5,847	4.9	4.8	5.0	5.2	5.4	5.5
Part-time workers	1,283	1,289	1,212	7.1	7.6	8.1	7.9	7.1	6.8
Labor force time lost[2]	—	—	—	5.9	5.9	6.0	6.3	6.4	6.6
INDUSTRY									
Nonagricultural private wage and salary workers	4,821	5,460	5,487	5.3	5.3	5.5	5.7	5.8	5.9
Goods-producing industries	1,819	2,006	2,107	6.2	5.9	6.6	6.9	7.0	7.3
Mining	32	27	27	4.8	3.8	4.4	4.9	3.8	3.7
Construction	581	738	834	9.3	8.7	10.2	11.1	11.8	13.2
Manufacturing	1,196	1,244	1,246	5.4	4.9	5.7	5.8	5.7	5.7
Durable goods	682	773	743	5.2	4.8	5.8	5.9	6.0	5.8
Nondurable goods	514	470	503	5.6	5.0	5.7	5.6	5.3	5.6
Service-producing industries	3,102	3,454	3,380	4.9	5.0	5.0	5.2	5.3	5.3
Transportation and public utilities	245	261	270	3.9	3.0	3.7	4.1	3.9	4.1
Wholesale and retail trade	1,409	1,576	1,609	5.9	6.2	6.0	6.2	6.6	6.7
Finance and service industries	1,448	1,617	1,496	4.3	4.5	4.5	4.7	4.7	4.4
Government workers	481	517	507	2.7	2.9	2.8	2.8	2.9	2.8
Agricultural wage and salary workers	183	184	156	9.8	10.0	10.6	9.7	9.3	8.2

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[1] Unemployment as a percent of the civilian labor force.

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Oct. 1989	Sept. 1990	Oct. 1990	Oct. 1989	June 1990	July 1990	Aug. 1990	Sept. 1990	Oct. 1990
DURATION									
Less than 5 weeks	3,132	3,230	3,073	3,168	3,046	3,120	3,322	3,044	3,101
5 to 14 weeks	1,862	2,112	2,229	1,995	2,049	2,159	2,048	2,479	2,406
15 weeks and over	1,229	1,476	1,420	1,378	1,406	1,513	1,609	1,620	1,581
15 to 26 weeks	624	755	767	743	763	809	845	872	896
27 weeks and over	605	721	653	635	643	704	764	748	685
Average (mean) duration, in weeks	11.6	12.2	11.8	11.7	12.0	12.0	12.3	12.5	11.9
Median duration, in weeks	4.5	5.1	5.4	5.0	5.1	5.2	5.2	6.2	6.0
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	50.3	47.4	45.7	48.4	46.9	45.9	47.6	42.6	43.8
5 to 14 weeks	29.9	31.0	33.2	30.5	31.5	31.8	29.3	34.7	33.9
15 weeks and over	19.7	21.6	21.1	21.1	21.6	22.3	23.0	22.7	22.3
15 to 26 weeks	10.0	11.1	11.4	11.4	11.7	11.9	12.1	12.2	12.6
27 weeks and over	9.7	10.6	9.7	9.7	9.9	10.4	10.9	10.5	9.7

Table A-8. Reason for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted			Seasonally adjusted					
	Oct. 1989	Sept. 1990	Oct. 1990	Oct. 1989	June 1990	July 1990	Aug. 1990	Sept. 1990	Oct. 1990
NUMBER OF UNEMPLOYED									
Job losers	2,625	3,097	3,109	2,979	3,151	3,088	3,367	3,511	3,533
On layoff	620	826	808	780	918	960	973	1,127	1,020
Other job losers	2,004	2,271	2,301	2,199	2,233	2,128	2,394	2,384	2,513
Job leavers	1,052	1,056	1,030	994	995	1,027	984	934	970
Reentrants	1,933	2,074	1,957	1,890	1,789	1,960	1,876	1,986	1,904
New entrants	613	591	625	686	534	687	677	656	693
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	42.2	45.4	46.3	45.5	48.7	45.7	48.7	49.5	49.8
On layoff	10.0	12.1	12.0	11.9	14.2	14.2	14.1	15.9	14.4
Other job losers	32.2	33.3	34.2	33.6	34.5	31.5	34.7	33.6	35.4
Job leavers	16.9	15.5	15.3	15.2	15.4	15.2	14.3	13.2	13.7
Reentrants	31.1	30.4	29.1	28.9	27.7	29.0	27.2	28.0	26.8
New entrants	9.9	8.7	9.3	10.5	8.3	10.2	9.8	9.3	9.8
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	2.1	2.5	2.5	2.4	2.5	2.5	2.7	2.8	2.8
Job leavers	.8	.8	.8	.8	.8	.8	.8	.7	.8
Reentrants	1.6	1.7	1.6	1.5	1.4	1.6	1.5	1.6	1.5
New entrants	.5	.5	.5	.6	.4	.6	.5	.5	.6

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates¹					
	Oct. 1989	Sept. 1990	Oct. 1990	Oct. 1989	June 1990	July 1990	Aug. 1990	Sept. 1990	Oct. 1990
Total, 16 years and over	6,563	7,069	7,073	5.3	5.2	5.5	5.6	5.7	5.7
16 to 24 years	2,428	2,454	2,493	11.1	10.3	11.0	11.5	11.6	11.8
16 to 19 years	1,186	1,128	1,172	14.9	14.1	16.3	16.7	15.5	16.2
16 to 17 years	536	512	506	16.9	16.1	17.4	19.2	18.4	18.8
18 to 19 years	645	652	680	13.5	13.4	15.2	15.0	14.4	14.6
20 to 24 years	1,242	1,326	1,321	8.9	8.2	8.3	8.8	9.6	9.8
25 years and over	4,144	4,667	4,585	4.1	4.1	4.3	4.4	4.5	4.4
25 to 54 years	3,652	4,121	4,036	4.2	4.4	4.5	4.6	4.7	4.6
55 years and over	484	513	556	3.0	2.8	3.2	3.5	3.3	3.6
Men, 16 years and over	3,553	3,943	3,918	5.2	5.3	5.6	5.7	5.8	5.7
16 to 24 years	1,349	1,326	1,330	11.7	11.1	11.6	11.6	12.0	12.0
16 to 19 years	661	634	629	15.9	15.4	17.5	17.8	16.7	16.5
16 to 17 years	308	274	257	18.5	16.4	18.4	21.5	18.6	18.1
18 to 19 years	353	379	371	14.2	14.8	16.3	15.5	16.2	15.7
20 to 24 years	688	692	701	9.3	8.9	8.5	8.5	9.5	9.7
25 years and over	2,214	2,642	2,606	3.9	4.1	4.4	4.6	4.6	4.5
25 to 54 years	1,919	2,274	2,257	4.0	4.3	4.5	4.6	4.7	4.7
55 years and over	280	342	360	3.2	3.1	3.6	3.8	3.8	4.1
Women, 16 years and over	3,010	3,126	3,156	5.4	5.0	5.3	5.5	5.5	5.6
16 to 24 years	1,079	1,128	1,163	10.4	9.3	10.4	11.4	11.2	11.6
16 to 19 years	525	494	543	13.8	12.8	14.9	15.6	14.2	15.8
16 to 17 years	226	236	251	15.0	15.9	16.4	16.6	17.9	19.6
18 to 19 years	292	273	289	12.8	11.9	13.9	14.4	12.6	13.4
20 to 24 years	554	634	620	8.5	7.5	8.0	9.3	9.6	9.4
25 years and over	1,930	2,025	1,969	4.2	4.1	4.2	4.3	4.4	4.3
25 to 54 years	1,733	1,847	1,779	4.4	4.4	4.4	4.5	4.6	4.5
55 years and over	184	171	196	2.8	2.4	2.6	3.1	2.6	3.0

¹ Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted¹					
	Oct. 1989	Sept. 1990	Oct. 1990	Oct. 1989	June 1990	July 1990	Aug. 1990	Sept. 1990	Oct. 1990
Civilian noninstitutional population	27,227	27,761	27,808	27,227	27,612	27,668	27,711	27,761	27,808
Civilian labor force	17,636	17,518	17,658	17,601	17,540	17,448	17,496	17,527	17,614
Participation rate	64.8	63.1	63.5	64.6	63.5	63.1	63.1	63.1	63.3
Employed	15,902	15,684	15,846	15,797	15,883	15,656	15,671	15,629	15,746
Employment-population ratio²	58.4	56.5	57.0	58.0	57.5	56.6	56.6	56.3	56.6
Unemployed	1,734	1,834	1,811	1,804	1,657	1,793	1,826	1,887	1,868
Unemployment rate	9.8	10.5	10.3	10.2	9.4	10.3	10.4	10.8	10.6
Not in labor force	9,591	10,243	10,150	9,626	10,072	10,220	10,213	10,234	10,194

¹ The population figures are not adjusted for seasonal variation, therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

² Civilian employment as a percent of the civilian noninstitutional population.

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	Oct. 1989	Oct. 1990	Oct. 1989	Oct. 1990	Oct. 1989	Oct. 1990
Total, 16 years and over[1]	118,194	118,299	6,222	6,722	5.0	5.4
Managerial and professional specialty	31,224	30,879	593	707	1.9	2.2
Executive, administrative, and managerial	15,146	14,792	337	386	2.2	2.5
Professional specialty	16,078	16,087	256	321	1.6	2.0
Technical, sales, and administrative support	36,009	36,518	1,541	1,634	4.1	4.3
Technicians and related support	3,543	3,819	99	104	2.7	2.7
Sales occupations	14,006	14,055	664	701	4.5	4.7
Administrative support, including clerical	18,460	18,644	777	829	4.0	4.3
Service occupations	15,407	15,758	1,032	1,103	6.3	6.5
Private household	798	777	41	32	4.9	4.0
Protective service	1,883	1,926	62	86	3.2	4.4
Service, except private household and protective	12,726	13,055	929	984	6.8	7.0
Precision production, craft, and repair	13,930	13,625	652	806	4.5	5.6
Mechanics and repairers	4,482	4,478	147	163	3.2	3.5
Construction trades	5,404	5,182	348	466	6.1	8.3
Other precision production, craft, and repair	4,044	3,965	156	177	3.7	4.3
Operators, fabricators, and laborers	18,145	18,084	1,436	1,574	7.3	8.0
Machine operators, assemblers, and inspectors	8,160	8,158	632	724	7.2	8.1
Transportation and material moving occupations	5,113	5,013	267	258	5.0	4.9
Handlers, equipment cleaners, helpers, and laborers	4,872	4,913	536	592	9.9	10.8
Construction laborers	733	742	104	167	12.4	18.3
Other handlers, equipment cleaners, helpers, and laborers	4,139	4,171	432	426	9.5	9.3
Farming, forestry, and fishing	3,478	3,434	233	186	6.3	5.1

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Oct. 1989	Oct. 1990	Oct. 1989	Oct. 1990	Oct. 1989	Oct. 1990	Oct. 1989	Oct. 1990	Oct. 1989	Oct. 1990
VIETNAM-ERA VETERANS										
Total, 35 years and over	7,504	7,680	6,872	6,980	6,630	6,718	242	262	3.5	3.8
35 to 49 years	6,491	6,501	6,163	6,156	5,969	5,924	194	232	3.2	3.8
35 to 39 years	1,644	1,339	1,538	1,253	1,486	1,172	51	81	3.3	6.5
40 to 44 years	3,301	3,245	3,163	3,085	3,058	3,001	105	84	3.3	2.7
45 to 49 years	1,546	1,917	1,463	1,818	1,424	1,752	39	66	2.6	3.7
50 years and over	1,013	1,179	709	824	661	794	47	30	6.7	3.7
NONVETERANS										
Total, 35 to 49 years	18,484	17,725	15,518	16,652	15,005	16,052	514	600	3.3	3.6
35 to 39 years	7,549	8,133	7,185	7,764	6,958	7,460	227	303	3.2	3.9
40 to 44 years	4,806	5,400	4,515	5,018	4,362	4,836	152	182	3.4	3.6
45 to 49 years	4,129	4,192	3,818	3,870	3,684	3,755	134	115	3.5	3.0

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 35 to 49 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Oct. 1989	Sept. 1990	Oct. 1990	Oct. 1989	June 1990	July 1990	Aug. 1990	Sept. 1990	Oct. 1990
California									
Civilian noninstitutional population	21,802	22,039	22,078	21,802	21,918	21,961	21,999	22,039	22,078
Civilian labor force	14,706	14,606	14,658	14,673	14,801	14,751	14,816	14,616	14,613
Employed	14,036	13,761	13,826	13,955	14,073	13,995	14,010	13,747	13,729
Unemployed	670	845	832	718	728	756	806	869	884
Unemployment rate	4.6	5.8	5.7	4.9	4.9	5.1	5.4	5.9	6.0
Florida									
Civilian noninstitutional population	9,959	10,169	10,188	9,959	10,111	10,132	10,150	10,169	10,188
Civilian labor force	6,249	6,419	6,475	6,225	6,294	6,313	6,265	6,450	6,454
Employed	5,893	6,024	6,076	5,864	5,886	5,953	5,839	6,061	6,054
Unemployed	357	395	399	361	408	360	426	389	400
Unemployment rate	5.7	6.2	6.2	5.8	6.5	5.7	6.8	6.0	6.2
Illinois									
Civilian noninstitutional population	8,845	8,882	8,885	8,845	8,871	8,876	8,879	8,882	8,885
Civilian labor force	6,044	6,029	6,044	6,031	5,986	6,102	5,954	6,008	6,034
Employed	5,665	5,636	5,698	5,636	5,625	5,691	5,568	5,573	5,678
Unemployed	379	393	346	395	361	411	386	435	356
Unemployment rate	6.3	6.5	5.7	6.5	6.0	6.7	6.5	7.2	5.9
Massachusetts									
Civilian noninstitutional population	4,619	4,621	4,620	4,619	4,620	4,620	4,620	4,621	4,620
Civilian labor force	3,121	3,147	3,116	3,138	3,172	3,167	3,171	3,167	3,136
Employed	2,993	2,953	2,930	2,997	2,987	2,973	2,960	2,968	2,937
Unemployed	128	194	186	141	185	194	211	199	199
Unemployment rate	4.1	6.2	6.0	4.5	5.8	6.1	6.7	6.3	6.3
Michigan									
Civilian noninstitutional population	6,990	7,000	7,004	6,990	6,999	7,001	7,002	7,003	7,004
Civilian labor force	4,684	4,579	4,563	4,668	4,631	4,614	4,599	4,568	4,524
Employed	4,321	4,264	4,236	4,296	4,294	4,271	4,237	4,237	4,191
Unemployed	363	315	327	372	337	343	362	331	333
Unemployment rate	7.7	6.9	7.2	8.0	7.3	7.4	7.9	7.2	7.4
New Jersey									
Civilian noninstitutional population	6,032	6,027	6,026	6,032	6,029	6,028	6,028	6,027	6,026
Civilian labor force	3,962	4,041	4,066	4,021	4,037	4,073	4,066	4,083	4,126
Employed	3,771	3,838	3,846	3,828	3,845	3,879	3,872	3,870	3,901
Unemployed	191	203	220	193	192	194	194	213	225
Unemployment rate	4.8	5.0	5.4	4.8	4.8	4.8	4.8	5.2	5.5
New York									
Civilian noninstitutional population	13,808	13,801	13,799	13,808	13,801	13,802	13,801	13,801	13,799
Civilian labor force	8,686	8,671	8,623	8,674	8,732	8,686	8,586	8,751	8,632
Employed	8,285	8,198	8,161	8,253	8,287	8,222	8,155	8,267	8,151
Unemployed	401	473	462	421	445	464	431	484	481
Unemployment rate	4.6	5.5	5.4	4.9	5.1	5.3	5.0	5.5	5.6
North Carolina									
Civilian noninstitutional population	4,956	5,012	5,016	4,956	4,998	5,002	5,006	5,012	5,016
Civilian labor force	3,397	3,397	3,380	3,385	3,438	3,410	3,370	3,407	3,367
Employed	3,293	3,286	3,232	3,275	3,312	3,252	3,247	3,280	3,212
Unemployed	104	110	148	110	126	158	123	127	155
Unemployment rate	3.1	3.3	4.4	3.2	3.7	4.6	3.6	3.7	4.6
Ohio									
Civilian noninstitutional population	8,269	8,290	8,291	8,269	8,283	8,286	8,288	8,290	8,291
Civilian labor force	5,477	5,436	5,493	5,462	5,419	5,411	5,446	5,480	5,470
Employed	5,169	5,177	5,187	5,135	5,135	5,104	5,174	5,196	5,145
Unemployed	308	259	306	327	284	307	272	284	325
Unemployment rate	5.6	4.8	5.6	6.0	5.2	5.7	5.0	5.2	5.9

See footnotes at end of table.

Table A-13. Employment status of the civilian population for eleven large States—Continued

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Oct. 1989	Sept. 1990	Oct. 1990	Oct. 1989	June 1990	July 1990	Aug. 1990	Sept. 1990	Oct. 1990
Pennsylvania									
Civilian noninstitutional population	9,374	9,383	9,386	9,374	9,367	9,380	9,382	9,383	9,386
Civilian labor force	5,817	5,858	5,897	5,803	5,894	5,869	5,777	5,850	5,887
Employed	5,560	5,561	5,550	5,530	5,623	5,574	5,496	5,531	5,525
Unemployed	257	297	346	273	271	295	281	319	362
Unemployment rate	4.4	5.1	5.9	4.7	4.6	5.0	4.9	5.5	6.1
Texas									
Civilian noninstitutional population	12,263	12,404	12,416	12,263	12,366	12,379	12,391	12,404	12,416
Civilian labor force	8,474	8,491	8,406	8,460	8,452	8,371	8,325	8,484	8,398
Employed	7,963	7,965	7,961	7,908	7,979	7,853	7,833	7,953	7,916
Unemployed	511	526	445	552	473	518	492	531	482
Unemployment rate	6.0	6.2	5.3	6.5	5.6	6.2	5.9	6.3	5.7

[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

Table B-1. Employees on nonfarm payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Oct. 1989	Aug. 1990	Sept. 1990p/	Oct. 1990p/	Oct. 1989	June 1990	July 1990	Aug. 1990	Sept. 1990p/	Oct. 1990p/
Total	109,719	110,304	110,858	111,235	108,980	110,829	110,740	110,613	110,561	110,493
Total private	91,606	93,147	92,834	92,669	91,096	92,282	92,300	92,320	92,262	92,164
Goods-producing industries	25,642	25,458	25,343	25,143	25,283	25,162	25,105	25,013	24,936	24,794
Mining	719	768	746	745	710	744	745	735	736	735
Oil and gas extraction	393.1	414.4	413.3	415.1	398	413	413	410	410	412
Construction	5,491	5,537	5,452	5,348	5,239	5,270	5,229	5,194	5,183	5,103
General building contractors	1,387.6	1,381.6	1,357.8	1,332.0	1,338	1,334	1,319	1,307	1,309	1,286
Manufacturing	19,432	19,173	19,145	19,050	19,334	19,148	19,131	19,084	19,017	18,956
Production workers	13,270	13,034	13,032	12,936	13,171	13,007	13,010	12,968	12,903	12,863
Durable goods	11,375	11,125	11,107	11,060	11,337	11,201	11,179	11,129	11,067	11,027
Production workers	7,578	7,377	7,383	7,330	7,541	7,430	7,438	7,395	7,340	7,315
Lumber and wood products	759.5	756.9	749.6	737.9	753	743	742	739	736	731
Furniture and fixtures	525.0	510.7	511.6	511.1	521	515	511	513	511	508
Stone, clay, and glass products	573.8	561.3	558.4	552.5	566	556	552	551	547	545
Primary metal industries	763.0	754.1	752.8	750.3	764	756	759	755	751	751
Blast furnaces and basic steel products	272.4	272.1	270.5	269.6	274	270	271	271	270	271
Fabricated metal products	1,440.9	1,413.7	1,417.0	1,410.5	1,433	1,415	1,419	1,419	1,411	1,403
Industrial machinery and equipment	2,119.1	2,085.9	2,075.8	2,071.3	2,125	2,108	2,104	2,096	2,082	2,078
Electronic and other electrical equipment	1,746.3	1,686.5	1,677.8	1,673.8	1,737	1,703	1,695	1,685	1,673	1,665
Transportation equipment	2,032.3	1,974.7	1,984.7	1,974.1	2,031	2,021	2,015	1,997	1,981	1,976
Motor vehicles and equipment	836.4	799.0	812.0	807.3	833	826	829	814	805	804
Instruments and related products	1,020.5	993.2	989.2	987.8	1,021	1,000	996	990	990	989
Miscellaneous manufacturing	394.6	387.7	390.4	391.0	386	384	386	384	385	383
Nondurable goods	8,057	8,048	8,038	7,990	7,997	7,947	7,952	7,955	7,950	7,929
Production workers	5,692	5,657	5,649	5,606	5,630	5,568	5,572	5,573	5,563	5,548
Food and kindred products	1,697.0	1,730.7	1,734.2	1,701.3	1,651	1,643	1,645	1,650	1,653	1,655
Tobacco products	50.5	47.7	49.0	48.6	48	47	46	48	47	46
Textile mill products	724.0	703.2	700.2	694.1	721	702	702	700	697	691
Apparel and other textile products	1,073.8	1,025.8	1,029.7	1,027.2	1,066	1,029	1,027	1,026	1,026	1,020
Paper and allied products	697.6	706.0	701.2	698.7	697	699	701	702	700	698
Printing and publishing	1,563.9	1,577.7	1,572.2	1,576.8	1,567	1,582	1,583	1,582	1,580	1,580
Chemicals and allied products	1,074.0	1,094.1	1,089.8	1,085.6	1,076	1,086	1,088	1,086	1,089	1,088
Petroleum and coal products	159.1	164.4	162.8	162.2	158	160	160	163	161	160
Rubber and misc. plastics products	880.9	871.6	872.4	871.4	878	871	874	874	872	869
Leather and leather products	136.4	127.1	126.3	124.0	135	128	126	125	125	122
Service-producing industries	84,077	84,846	85,515	86,092	83,697	85,667	85,635	85,600	85,625	85,699
Transportation and public utilities	5,720	5,851	5,916	5,928	5,671	5,846	5,841	5,846	5,868	5,877
Transportation	3,549	3,616	3,695	3,707	3,500	3,627	3,625	3,631	3,649	3,656
Communications and public utilities	2,171	2,235	2,221	2,221	2,171	2,219	2,216	2,215	2,219	2,221
Wholesale trade	6,333	6,409	6,379	6,374	6,313	6,383	6,374	6,376	6,367	6,356
Durable goods	3,746	3,785	3,760	3,754	3,744	3,779	3,775	3,770	3,764	3,754
Nondurable goods	2,587	2,624	2,619	2,620	2,569	2,604	2,599	2,606	2,603	2,602
Retail trade	19,688	19,965	19,872	19,804	19,665	19,822	19,831	19,846	19,832	19,784
General merchandise stores	2,535.6	2,438.0	2,436.2	2,478.4	2,527	2,496	2,494	2,493	2,484	2,471
Food stores	3,236.9	3,304.7	3,292.5	3,304.1	3,230	3,302	3,304	3,301	3,299	3,298
Automotive dealers and service stations	2,123.6	2,160.8	2,152.4	2,137.0	2,115	2,120	2,131	2,135	2,137	2,128
Eating and drinking places	6,481.4	6,805.2	6,768.3	6,619.4	6,491	6,598	6,619	6,613	6,623	6,633
Finance, insurance, and real estate	6,737	6,935	6,862	6,834	6,756	6,844	6,842	6,852	6,852	6,853
Finance	3,306	3,372	3,343	3,334	3,320	3,344	3,341	3,349	3,350	3,347
Insurance	2,104	2,157	2,144	2,150	2,109	2,143	2,147	2,151	2,150	2,156
Real estate	1,327	1,406	1,375	1,350	1,327	1,357	1,354	1,352	1,352	1,350
Services	27,486	28,529	28,464	28,586	27,408	28,225	28,287	28,387	28,407	28,500
Business services	5,026.7	5,107.7	5,123.2	5,110.9	4,970	5,060	5,051	5,052	5,062	5,050
Health services	7,685.3	8,215.9	8,233.7	8,286.1	7,690	8,096	8,132	8,191	8,234	8,294
Government	18,113	17,157	18,024	18,566	17,884	18,547	18,440	18,293	18,299	18,329
Federal	2,969	3,060	2,995	2,975	2,986	3,338	3,164	3,045	3,007	2,992
State	4,301	4,073	4,253	4,430	4,202	4,296	4,298	4,305	4,318	4,330
Local	10,843	10,024	10,776	11,161	10,696	10,913	10,978	10,943	10,974	11,007

p/ = preliminary.

Note on temporary census workers

The number of temporary workers associated with the 1990 census has an impact on the employment levels for the Federal government, as well as for higher aggregates. The estimate of these workers was 22,000 in January, 27,000 in February, 117,000 in March, 178,000 in April, 378,000 in May, 367,000 in June, 194,000 in July, 66,000 in August, and 26,000 in September. For October, the estimated number (preliminary) was 19,000.

Table B-2. Average weekly hours of production or nonsupervisory workers1/ on private nonfarm payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Oct. 1989	Aug. 1990	Sept. 1990p/	Oct. 1990p/	Oct. 1989	June 1990	July 1990	Aug. 1990	Sept. 1990p/	Oct. 1990p/
Total private	34.8	34.8	34.8	34.4	34.6	34.7	34.5	34.5	34.7	34.2
Mining	44.1	44.0	45.0	44.8	43.6	44.6	43.7	43.9	44.6	44.2
Construction	39.2	39.0	39.1	38.0	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	40.9	40.8	41.3	41.0	40.8	41.0	40.9	41.0	41.1	40.8
Overtime hours	3.9	3.9	4.1	3.8	3.7	3.8	3.7	3.8	3.7	3.7
Durable goods	41.4	41.3	41.8	41.5	41.3	41.6	41.5	41.5	41.7	41.4
Overtime hours	3.9	3.9	4.1	3.9	3.7	3.9	3.8	3.9	3.8	3.7
Lumber and wood products	40.6	40.6	41.0	40.3	40.3	40.3	40.2	40.6	40.8	39.9
Furniture and fixtures	39.8	39.6	39.7	39.2	39.2	39.3	39.6	39.6	39.1	38.6
Stone, clay, and glass products	43.0	42.7	42.7	42.0	42.4	42.3	41.7	42.3	42.2	41.3
Primary metal industries	42.4	42.5	43.2	42.9	42.5	43.0	43.1	42.9	43.0	43.0
Blast furnaces and basic steel products	42.9	43.2	44.0	43.9	42.8	43.3	44.1	43.5	44.0	44.2
Fabricated metal products	41.5	41.3	41.8	41.6	41.4	41.6	41.7	41.6	41.6	41.[illegible]
Industrial machinery and equipment	42.0	41.6	42.3	42.0	42.1	42.0	42.0	42.1	42.2	42.1
Electronic and other electrical equipment	41.1	40.6	41.2	40.8	41.0	41.0	40.7	40.6	41.1	40.6
Transportation equipment	41.3	41.8	42.9	42.5	41.3	42.6	42.8	42.6	42.8	42.5
Motor vehicles and equipment	43.0	42.6	44.0	43.5	42.7	43.7	43.6	43.7	43.5	43.1
Instruments and related products	41.0	40.9	41.6	41.2	41.0	41.2	41.2	41.3	41.6	41.2
Miscellaneous manufacturing	39.7	39.7	40.0	40.1	39.3	39.4	39.5	39.9	40.0	39.7
Nondurable goods	40.3	40.3	40.6	40.3	40.1	40.3	40.1	40.2	40.2	40.1
Overtime hours	3.8	3.9	4.1	3.8	3.6	3.6	3.6	3.7	3.6	3.6
Food and kindred products	41.1	41.5	41.9	41.0	40.8	40.9	40.5	41.0	41.2	40.6
Tobacco products	40.3	39.4	40.9	40.4	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	40.9	40.3	40.6	40.2	40.6	40.6	40.2	40.0	39.9	39.9
Apparel and other textile products	37.1	36.7	36.7	36.7	36.9	36.7	36.6	36.6	36.6	36.5
Paper and allied products	43.4	43.2	43.6	43.8	43.3	43.5	43.5	43.5	43.1	43.7
Printing and publishing	37.9	38.5	38.5	38.3	37.8	38.0	38.0	38.2	38.0	38.2
Chemicals and allied products	42.4	42.0	42.7	42.6	42.5	42.6	42.4	42.3	42.7	42.7
Petroleum and coal products	45.2	43.8	45.2	44.5	(2)	(2)	(2)	(2)	(2)	(2)
Rubber and misc. plastics products	41.3	41.1	41.6	41.3	41.1	41.6	41.5	41.3	41.4	41.1
Leather and leather products	37.9	38.0	37.5	37.3	37.7	37.5	37.4	37.7	37.5	37.1
Transportation and public utilities	39.0	39.2	39.3	38.8	38.8	39.2	39.0	38.9	39.2	38.6
Wholesale trade	38.2	38.1	38.3	38.2	38.1	38.1	38.1	38.1	38.2	38.0
Retail trade	28.9	29.4	28.9	28.4	28.9	29.0	28.9	28.7	28.9	28.4
Finance, insurance, and real estate	36.1	35.7	36.1	35.6	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.8	32.8	32.7	32.4	32.7	32.6	32.6	32.5	32.8	32.3

1/ Data relate to production workers in mining and manufacturing; construction workers in construction; and nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonfarm payrolls.

2/ These series are not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary.

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers1/ on private nonfarm payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Oct. 1989	Aug. 1990	Sept. 1990p/	Oct. 1990p/	Oct. 1989	Aug. 1990	Sept. 1990p/	Oct. 1990p/
Total private	$9.81	$10.08	$10.17	$10.17	$341.39	$348.88	$353.92	$349.85
Seasonally adjusted	9.78	10.09	10.13	10.13	338.39	348.11	351.51	346.45
Mining	13.23	13.63	13.81	13.77	583.44	599.72	621.45	616.90
Construction	13.71	13.74	13.92	13.90	537.43	533.86	544.27	528.20
Manufacturing	10.34	10.82	10.94	10.96	431.09	441.46	451.82	449.36
Durable goods	11.07	11.35	11.49	11.50	458.30	468.76	480.28	477.25
Lumber and wood products	8.96	9.14	9.22	9.13	363.78	371.08	378.02	367.94
Furniture and fixtures	8.41	8.56	8.64	8.61	334.72	338.98	343.01	337.51
Stone, clay, and glass products	10.90	11.17	11.27	11.23	468.70	476.96	481.23	471.66
Primary metal industries	12.50	12.94	13.05	13.07	530.00	549.95	561.76	560.70
Blast furnaces and basic steel products	14.42	14.86	14.99	15.07	612.85	641.95	639.56	661.57
Fabricated metal products	10.61	10.84	10.94	10.96	448.32	447.69	457.29	455.94
Industrial machinery and equipment	11.48	11.80	11.93	11.91	482.16	499.08	504.64	500.22
Electronic and other electrical equipment	10.08	10.33	10.43	10.45	414.29	417.33	429.72	426.36
Transportation equipment	13.82	14.07	14.31	14.42	570.77	588.13	613.90	612.85
Motor vehicles and equipment	14.42	14.54	14.85	15.00	620.06	614.50	653.40	652.50
Instruments and related products	10.97	11.35	11.47	11.48	449.77	464.22	474.86	472.98
Miscellaneous manufacturing	8.36	8.59	8.62	8.68	331.89	341.02	344.80	348.07
Nondurable goods	9.81	10.12	10.20	10.23	395.34	407.84	414.12	412.27
Food and kindred products	9.33	9.55	9.56	9.58	383.46	396.33	400.56	392.78
Tobacco products	14.91	16.34	16.12	15.66	600.87	643.80	659.31	632.66
Textile mill products	7.76	8.04	8.09	8.10	317.38	324.01	326.84	323.62
Apparel and other textile products	6.39	6.62	6.69	6.67	237.07	242.95	245.52	244.79
Paper and allied products	12.01	12.29	12.43	12.45	521.23	530.93	541.95	545.31
Printing and publishing	11.06	11.30	11.41	11.37	419.17	432.79	439.29	433.47
Chemicals and allied products	13.27	13.57	13.63	13.76	562.65	569.94	582.00	586.18
Petroleum and coal products	15.60	16.06	16.42	16.56	705.12	703.43	742.18	736.92
Rubber and misc. plastics products	9.50	9.81	9.90	9.92	392.35	403.19	411.84	409.70
Leather and leather products	6.65	6.85	6.97	7.01	232.09	260.30	261.38	261.47
Transportation and public utilities	12.74	12.96	13.04	13.03	496.86	508.03	512.47	509.56
Wholesale trade	10.31	10.77	10.94	10.90	401.48	410.34	419.00	416.38
Retail trade	6.61	6.75	6.86	6.84	191.83	198.45	198.25	194.82
Finance, insurance, and real estate	9.70	9.96	10.12	10.09	350.17	355.57	365.33	359.20
Services	9.38	9.78	9.90	10.02	314.22	320.78	326.67	324.65

1/ See footnote 1, table B-2.

p = preliminary.

Table B-4. Average hourly earnings of production or nonsupervisory workers1/ on private nonfarm payrolls by industry, seasonally adjusted

Industry	Oct. 1989	June 1990	July 1990	Aug. 1990	Sept. 1990p/	Oct. 1990p/	Percent change from: Sept. 1990-Oct. 1990
Total private:							
Current dollars	$9.78	$10.03	$10.07	$10.09	$10.13	$10.13	0.0
Constant (1982) dollars2/	7.65	7.58	7.58	7.54	7.50	N.A.	(3)
Mining	13.32	13.73	13.79	13.73	13.82	$13.87	.4
Construction	13.61	13.73	13.76	13.78	13.82	13.80	-.1
Manufacturing	10.57	10.86	10.89	10.90	10.93	10.98	.5
Excluding overtime4/	10.10	10.38	10.40	10.40	10.44	10.51	.7
Transportation and public utilities	12.71	12.92	13.02	13.00	12.99	12.99	.0
Wholesale trade	10.54	10.80	10.84	10.84	10.94	10.92	-.2
Retail trade	6.60	6.78	6.79	6.82	6.84	6.85	.1
Finance, insurance, and real estate	9.72	9.98	10.08	10.06	10.17	10.10	-.7
Services	9.55	9.85	9.92	9.93	9.99	9.99	.0

1/ See footnote 1, table B-2.

2/ The Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) is used to deflate this series.

3/ Change was -0.3 percent from August 1990 to September 1990, the latest month available.

4/ Derived by assuming that overtime hours are paid at the rate of time and one-half.

N.A. = not available.

p/ = preliminary.

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers1/ on private nonfarm payrolls by industry

(1982=100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Oct. 1989	Aug. 1990	Sept. 1990p/	Oct. 1990p/	Oct. 1989	June 1990	July 1990	Aug. 1990	Sept. 1990p/	Oct. 1990p/
Total private	124.8	127.1	126.6	124.8	123.4	125.3	124.8	124.6	125.3	123.3
Goods-producing industries	114.8	113.2	113.9	111.4	111.6	111.7	110.5	110.5	110.4	108.3
Mining	64.8	67.8	69.1	68.8	63.1	68.0	66.9	66.1	67.3	66.9
Construction	154.4	154.1	151.9	144.2	141.7	144.3	138.4	139.8	140.3	132.4
Manufacturing	109.5	107.3	108.6	107.1	108.3	107.6	107.4	107.1	106.8	105.8
Durable goods	108.7	105.5	107.1	105.7	107.9	107.1	107.1	106.5	106.1	104.8
Lumber and wood products	135.0	134.3	134.1	129.4	132.6	130.5	129.7	129.7	130.8	126.9
Furniture and fixtures	130.8	125.6	126.3	124.5	127.9	124.0	125.8	125.7	124.2	121.7
Stone, clay, and glass products	116.7	113.1	112.5	109.5	113.3	110.5	108.2	109.5	108.7	105.9
Primary metal industries	93.1	92.2	93.8	92.7	93.6	93.5	94.3	93.0	92.9	93.1
Blast furnaces and basic steel products	79.8	81.0	82.1	81.3	81.4	80.4	82.3	80.8	81.7	82.9
Fabricated metal products	110.1	107.0	108.5	107.6	108.9	107.8	108.5	108.1	107.4	106.4
Industrial machinery and equipment	98.8	95.9	97.1	96.1	99.2	98.4	98.5	98.1	97.1	96.7
Electronic and other electrical equipment	112.7	106.4	108.0	106.9	111.9	109.6	108.3	107.2	107.7	106.0
Transportation equipment	120.3	117.4	121.8	125.2	120.2	123.3	124.1	122.2	121.3	120.0
Motor vehicles and equipment	133.3	124.1	131.7	129.6	132.3	133.7	133.2	131.2	128.9	127.7
Instruments and related products	89.0	85.9	86.7	86.3	88.5	87.2	86.8	86.5	86.4	85.8
Miscellaneous manufacturing	108.1	105.4	107.0	107.4	104.3	102.7	104.5	104.8	105.0	103.9
Nondurable goods	110.7	109.9	110.7	109.0	109.0	108.2	107.7	108.0	107.9	107.3
Food and kindred products	113.8	118.1	119.5	114.3	108.9	108.7	107.9	109.7	110.4	108.9
Tobacco products	76.5	68.4	74.2	72.3	68.8	64.3	66.6	68.8	68.5	65.3
Textile mill products	106.1	101.1	101.0	99.4	104.9	101.2	100.6	100.1	99.1	98.1
Apparel and other textile products	98.6	92.7	93.1	92.7	97.3	93.0	92.4	92.4	92.3	91.6
Paper and allied products	110.9	111.8	112.1	112.4	110.2	111.4	111.6	111.8	110.5	112.1
Printing and publishing	126.4	129.0	129.0	128.5	126.4	128.6	129.0	129.6	128.3	128.7
Chemicals and allied products	104.4	103.5	104.6	104.1	105.0	104.4	104.3	103.2	104.3	104.7
Petroleum and coal products	89.9	90.1	91.8	90.2	87.5	93.0	88.3	88.0	89.6	87.6
Rubber and misc. plastics products	128.2	125.5	127.6	126.3	126.9	127.3	127.2	126.8	126.7	125.2
Leather and leather products	65.9	61.0	59.6	57.9	64.3	61.1	59.8	59.6	58.8	57.0
Service-producing industries	129.3	133.4	132.3	130.8	128.8	131.4	131.2	130.9	132.0	130.1
Transportation and public utilities	113.8	116.5	118.2	117.0	112.9	116.7	115.8	115.2	116.7	115.2
Wholesale trade	119.5	120.4	120.2	119.8	118.7	119.8	119.5	119.5	119.6	118.9
Retail trade	124.0	128.2	125.2	122.6	123.9	125.3	125.1	124.1	124.9	122.4
Finance, insurance, and real estate	121.7	124.7	124.3	121.7	121.8	122.9	123.1	122.9	124.3	121.9
Services	142.8	148.3	147.4	146.5	142.1	145.8	145.9	146.0	147.5	145.7

1/ See footnote 1, table B-2.

p = preliminary.

Table B-6. Diffusion indexes of employment change, seasonally adjusted

(Percent)

Time span	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.
	Private nonfarm payrolls, 356 industries1/											
Over 1-month span:												
1989	64.3	58.7	58.0	57.0	55.6	57.3	55.8	57.7	50.0	55.2	59.6	56.6
1990	55.6	58.6	53.7	49.9	55.8	49.9	50.8	48.2	p/44.9	p/44.9		
Over 3-month span:												
1989	65.3	64.2	60.0	60.1	59.7	58.3	59.7	54.5	55.2	55.8	57.7	60.3
1990	58.4	56.7	54.8	53.1	53.7	55.3	50.1	p/44.5	p/43.6			
Over 6-month span:												
1989	67.6	65.4	65.0	61.0	61.2	58.7	57.0	58.1	56.2	58.3	57.4	58.4
1990	57.3	56.5	55.5	55.9	51.4	p/48.2	p/46.8					
Over 12-month span:												
1989	67.1	67.7	65.3	64.6	64.9	61.2	60.1	59.8	58.6	57.3	56.7	56.0
1990	54.8	54.1	p/53.4	p/50.4								
	Manufacturing payrolls, 139 industries1/											
Over 1-month span:												
1989	60.4	48.6	50.4	47.1	43.3	45.7	45.0	45.7	34.2	48.6	43.5	40.2
1990	42.4	45.7	43.3	46.8	45.7	40.3	40.2	40.6	p/38.1	p/37.8		
Over 3-month span:												
1989	54.0	54.7	45.3	43.9	43.2	42.8	41.7	33.1	36.3	34.9	41.7	39.2
1990	40.3	37.1	44.2	41.4	40.6	44.2	39.9	p/34.2	p/29.9			
Over 6-month span:												
1989	56.5	49.6	49.3	43.5	42.1	37.1	36.7	34.9	34.2	35.5	33.1	36.0
1990	37.1	35.6	36.3	43.2	38.1	p/32.4	p/29.9					
Over 12-month span:												
1989	53.6	55.0	49.3	43.3	43.9	39.9	37.1	35.6	33.8	32.4	30.9	31.7
1990	31.3	31.3	p/30.2	p/27.0								

1/ Based on seasonally adjusted data for 1-, 3-, and 6-month spans and unadjusted data for the 12-month span. Data are centered within the span.

p/ = preliminary.

NOTE: Figures are the percent of industries with employment increasing plus one-half of the industries with unchanged employment, where 50 percent indicates an equal balance between industries with increasing and decreasing employment.

Representative SOLARZ. Congressman Hawkins, do you have any questions?

Representative HAWKINS. I really don't have any questions. But may I thank the Congressman, Mr. Solarz, for his very generous and rather unexpected remarks. I have enjoyed working with him and others. But in particular, Mrs. Norwood, I would like to express to you and your colleagues my very deep appreciation for the professional work you have done and the contribution you have made to Federal service, you and your colleagues. It has been a real pleasure to come to these hearings and feel confident that the presentation would be of very high professional character.

We haven't always agreed. We've had a few differences, not too many. And perhaps I was more irritable than constructive at times out of a very deep conviction that behind statistics we have human beings. And I always try to think in terms of human beings that are affected by the rise and fall of unemployment rates or inflation rates and so forth. And I can never quite console myself with the idea that we sat around from month to month and waited for you to come before the committee to give us either the good news or the bad news. And always when there was good news, there were a lot of individuals who would have praise for what was happening. But then with bad news, when it came about, they didn't seem to be around saying very much. That always worried me—not you, but reaction to your reports. And I shall miss your reports, but I will obviously keep up with them.

We have enjoyed the association and I want you to know that if I were abrasive at times, when I hope I wasn't, that it was not because of you. It was not anything personal. Obviously, we enjoy the great contribution you made. These are some of the things we will miss, but we will look forward to being advised of the reports.

I do hope to return to the private sector. I think I have been in the public sector too long. And I certainly look forward to continuing my friendship with Congressman Solarz. With that I am very happy. Commissioner Norwood, I walked down the hall this morning primarily because I wanted to tell you this officially—and to let it be known—on the record—that I think you have done a wonderful job. And I hope that it will continue. Thank you.

Mrs. NORWOOD. Thank you very much. I appreciate that.

Representative SOLARZ. Congressman Hawkins, I hope you will forgive me if I correct one part of your statement. I cannot believe you were ever irritable.

Mrs. NORWOOD. Certainly not. In fact, appearing before Congressman Hawkins and trying to respond to some of the questions he had was always a very instructive experience for us, because he always set me to thinking about something that hadn't occurred to me. And we were able to go back and try to track it down further. So he has provided a great service to us as well.

Representative SOLARZ. Mrs. Norwood, fortunately for you, we no longer conduct ourselves the way they did in ancient Greece, where the messengers who brought ill tidings lost their heads.

Mrs. NORWOOD. I am very pleased at that. [Laughter.]

Representative SOLARZ. I simply want to remind you of this contemporary reality, in order to encourage you to be as candid as possible with us on this occasion.

Are we in a recession?

Mrs. NORWOOD. I really don't know about that Congressman Solarz. Because the way I look at it is that what we are trying to do in talking about recession is to apply the rules of yesteryear to an economy that has changed completely. You yourself mentioned, for example, the fact that a lot of middle managers are now being eliminated from the payroll, that many of the senior skilled craftsmen, and the more experienced workers are being let go.

In other periods, the changes in the work force were somewhat different. Labor market declines were concentrated in the goods-producing economy. What has happened until quite recently was that we had such a strong service-producing economy that its growth counterbalanced declines in the goods sector.

As you yourself said, and as my statement indicates, if you look at manufacturing and construction, the situation is pretty bad. We have lost a lot of jobs in those two areas. There is very little business activity going on in the real estate market. And that affects, of course, the production of things that go into houses. It is quite widespread. We reported, for example, that there was decline in the retail trade industry, and there is some evidence that consumers are not fully confident in rushing out to buy things. It is that kind of activity that stimulates the economy. And we are not seeing that.

The only growth we are seeing at the moment is in the health services industry, which is important. And those are varying kinds of jobs, very highly technical jobs and some custodial type jobs. But the important thing, I think, is that they are not as stimulating to the economic development of our country as some of the other types of employment are.

Representative SOLARZ. If you don't know if we are in a recession, how are we supposed to know if we are in a recession?

Mrs. NORWOOD. I think the important thing is not whether we call this a recession or whether we don't call this a recession. The important thing is that the employment data suggest an economy that is declining, that is deteriorating and that requires, I think, that we take pause and consider the situation. There are a lot of technical definitions of recession that have not been met. It is very clear from this set of data that the employment situation has deteriorated. And that is an important message that we have——

Representative SOLARZ. You would agree with Gertrude Stein that a rose by any other name is still a rose.

Mrs. NORWOOD. I think she had something there. [Laughter.]

Representative SOLARZ. Is the economy clearly heading for what, in old-fashioned terms, used to be called a recession, even if you are not sure we are in one now?

Mrs. NORWOOD. Well, you know, the technical definition of a recession is that there has to be, for some period of time, a very strong downturn in economic activity, not just in the labor market, but in all economic activity. It has to be widely dispersed throughout the economy. And it has to have significant duration. We haven't seen that combination of circumstances yet. We certainly have seen in the labor market a rather serious decline in the goods-producing areas. And we are seeing really very lackluster performance in the service-producing areas, in which growth is limited, primarily, to health services. That doesn't quite meet the definition of recession, but it certainly bears watching. It certainly is not what we would like to be reporting.

Representative SOLARZ. If I press you on this, it's only because I do believe that self-knowledge is the first step toward a cure. And it is important for us to——

Mrs. NORWOOD. I believe that too.

Representative SOLARZ [continuing]. Have a diagnosis of what the situation is, so we can then determine what we need to do in order to correct it.

When would you say that this decline in the labor market and in the economy as a whole began? To what date would you trace it?

Mrs. NORWOOD. My understanding is that the Bureau of Economic Analysis has just released data that suggest that the third quarter GNP was about 1.8 percent. That's low, but it is not down. That is the broadest measure of the economy that we have. If we look at the labor market, I would say that you have to look at the individual industries. If you take manufacturing, as I indicated, I think it was 589,000 jobs that we lost since the peak of employment in manufacturing. That is a pretty steep drop. A very steep drop.

Representative SOLARZ. Since when?

Mrs. NORWOOD. Since January 1989. That is when employment really stopped growing and manufacturing began heading downward. That is a very steep drop. It is a very serious kind of problem. Production didn't decline quite so much as employment did. But, clearly, manufacturing has been in some real difficulty.

The same thing is true of construction. Construction didn't begin to decline quite as early as did the Nation's factories. But construction, of course, has been very much affected by the financing problems that have occurred. And in some of the conversations that I have had with a number of business people, there is concern about the availability of financing for business purposes generally. And that is also something that has a dampening effect.

Representative SOLARZ. Are you saying that in addition to the decline in manufacturing and construction employment, we are now beginning to witness a decline in service-oriented employment?

Mrs. NORWOOD. Yes. I think so, except for health services and education, which are growing. Health services, particularly is expanding, because of the aging of the population and medical discoveries. Education, because we had an increase in births some time ago. Except for those two areas, I don't see in the labor market very much stimulating activity. And that is worrying.

Representative SOLARZ. To what do you attribute the decline in manufacturing employment? We're talking about a pretty large loss of jobs here, over half a million.

Mrs. NORWOOD. I think you need to look at that in a more disaggregated form. We have had a number of industries that have been declining for decades. And that decline goes in fits and starts. But it has continued. The one that I mentioned in my statement this month which lost jobs was leather producing. Leather has been going down in terms of employment in this country for many, many years. And we have had problems in the textile industry and the apparel industry and many, many other industries of that kind.

The automobile industry is in a very different situation. It is decling in part because we have produced and sold in this country an awful lot of cars and we have fewer people in the market for an automobile now. The market is getting smaller. There are attitudes about domestic cars and foreign cars and quality and so on. But the automobile companies have been adjusting their production. We have had announcements from some of the largest ones that they are closing down a number of plants. There has been worldwide overproduction of automobiles, and the automobile companies are now beginning to adjust to that.

If you look at the high-tech area, we are seeing a turnaround there that is partly competition, and partly just the general economy. But there are special problems there and some of those companies are doing well and others are not.

There is also the issue of defense. We have had for many, many years a very strong defense buildup. We have not turned that around, but the future buildup is not anticipated to be as large. And so there probably will not be as much employment created for those purposes. So far, we are seeing a little bit of decline in the employment attributable to defense, but not a great deal.

And in construction, I've already talked about the problem of financing, the problem of people's incomes and so on.

Representative **Solarz**. How much of the loss in jobs in textiles is due to foreign imports and how much of it is due in automobiles?

Mrs. **Norwood**. I cannot tell you that. My own personal view is that it is very difficult to attribute sales or lack of sales to competition from imports. Competition from imports is like competition from anything else. If you produce a good product and you can sell it as a decent price, it will sell. I think that is what our automobile companies have found. They have been stressing now the development of higher quality, for example, which is probably the biggest problem in competition between the American and the Japanese companies.

Clearly, there has been a lot of automation in the textile industry. We have also cleaned up the textile industry. A couple of years ago I went through a textile plant. And it was highly mechanized, but it was also a lot cleaner. The air was cleaner and safer for the workers who were working there. All of that, of course, is adding to competitive costs.

Representative **Solarz**. Are you able to give us any estimate of what is likely to happen over the course of the next year or two in terms of the economy? Do you expect the situation to continue to deteriorate or do you anticipate a rebound?

Mrs. **Norwood**. I can't predict. We don't do any short-term forecasting. There are a number of companies that do, by feeding data into econometric models. I can tell you that one of the reasons that I included information on oil prices in my statement is that we anticipate that we will begin to see some of the indirect effects of the higher prices of oil and gasoline, in particular, and also fuel oil and other products that we have already have flowing through the economy. That causes pressure on inflation, which can have a dampening effect. Insofar as the labor market is concerned, that is something that the Federal Reserve Board is studying with great care.

Representative **Solarz**. Do you think the Federal Reserve should be more concerned about inflation or recession?

Mrs. **Norwood**. I leave that up to them to decide. We have spent some time with Alan Greenspan recently to review data with him so that he and his staff can be certain they have all the information that is available. That is a hard call to make. It is a policy judgment, I believe, which we don't get involved in.

Representative **Solarz**. I am told, Mrs. Norwood, that the labor force grows about 1.5 million per year. But there has been no labor force growth since March 1990. Do we normally go this long without getting new people entering the labor force? Why aren't people looking for jobs?

Mrs. **Norwood**. If we compare this to past years, this is an unusual situation. But it is caused by several different forces. One is that we have, for example, over the last year, a decline of several hundred thousand teenagers. That is largely because there were fewer teenagers born years ago to grow up to labor force age to come into the labor force. There was also a small drop in the labor force participation rate of teenagers.

We are also beginning to see, as I think my statement indicates, that the increase in labor force participation of women has slowed. Whether that will continue or not, I don't know. That could be because the economy is somewhat slow, and there are fewer new jobs. And in addition, many of the young people, in particular, generally finds jobs in the service-producing sector, and now that sector is not growing.

Representative **Solarz**. You were reluctant to characterize the current economic situation as one in which we are in a recession.

Mrs. **Norwood**. Knowing the technical definition of that word, I just didn't want to get into it.

Representative **Solarz**. Sure. But would it be fair to say that there are regions of the country which, if you look at their economy in regional terms, are clearly in a recession?

Mrs. **Norwood**. I was in Boston last week. And I can tell you that the whole New England area has clearly turned around considerably. There is no doubt about that. We are beginning to see some very big differences from one region of the country to another. For example, New England had the lowest unemployment rate in the country, largely because of the high-tech industry; but high tech turned around and then their unemployment rate began to shoot up.

We have seen some improvement in the Southwest—Texas, in particular, and Louisiana—places that are oil producing, though we haven't seen any very large employment increase in oil and gas extraction. Clearly, those economies which had a very disastrous experience in construction, in particular, and banking are beginning now to turn around a little bit. There are big differences.

Representative **Solarz**. Do you expect the budget agreement, that was recently adopted by the Congress and signed into law by the President, to have an impact on the economy over the course of the next several months or year?

Mrs. **Norwood**. Yes. I think it clearly will.

Representative **Solarz**. Will that be positive or negative?

Mrs. **Norwood**. I might say that having gone through what has been perhaps the most difficult experience of a manager, of not knowing from one day to the next whether we can pay our people, that it is a great relief to the whole country to have that behind us.

Clearly, there are some effects in the budget, which we expect to be in our price indexes. We have looked at that. We include excise taxes, for example, in the CPI. And if you look at the sum of those things which we can measure, we expect we'll have about close to three-tenths, about 0.28 percent increase in the CPI. I believe from my reading of the newspaper that the Federal Reserve Board has already eased a little bit, in order to accommodate for the budget agreement.

Representative **Solarz**. And by comparison, what do you think the economic impact on the country of a $100 billion sequestration would have been in the event we had failed to adopt a deficit reduction bill?

Mrs. **Norwood**. My own view is that—and I speak merely as myself and not as the representative in the Government—any kind of massive, across-the-board reduction is extremely hurtful, generally.

I also believe that makes it extraordinarily difficult to manage. We still have, after completing the Labor-HHS appropriation, an across-the-board 2.41 percent reduction. We had spent a great deal of time trying to be sure that we have carefully costed out our programs. So it becomes rather difficult to take the cut. Clearly, the magnitude of government services that would have been cut under sequestration would have been very, very serious.

Representative **Solarz**. And let me ask you finally, Mrs. Norwood, as I understood it, the survey from which your Bureau derived the October unemployment rate was conducted during the week of October 7 through the 13. The following week, according to information available to our committee, the number of new claims for unemployment insurance rose to 450,400.

Mrs. **Norwood**. Yes.

Representative **Solarz**. The second large weekly increase in a row. Would that have had any impact on the unemployment rate that you reported for October? And if it didn't, how will it affect next month's rate?

Mrs. **Norwood**. First, let me say that the definition of unemployment in the current population survey is not the same as the definition under unemployment insurance. We have seen an increase in job losers over the last several months. That's why we have had an increase in the unemployment rate of half a percentage point. Job losers are the ones who generally have UI coverage.

But we also include a lot of people who have not worked before or have reentered the labor force looking for a job as well as others who are not covered by UI. Only about a third of the total unemployed that we count are covered by UI for those reasons.

If the unemployment increases occurred after the survey, obviously we will pick it up next month. I'm not convinced that has happened, however. Really what we are seeing is, as I indicated, a very slow growth in the labor force, which means that it is a lot easier to have a lower unemployment rate.

Representative **Solarz.** Congressman Hawkins, do you have any questions?

Representative **Hawkins.** No, I haven't. I think you have carefully avoided policy, and I can appreciate that. In answer to the question of whether the budget agreement would be negative or positive, I take it that you hesitate to make predictions.

Mrs. **Norwood.** I have mixed feelings. I have some positive and some negative aspects.

Representative **Hawkins.** I think we all have the right to have mixed feelings about it. It is not what you bring to us that I am so critical of, Mrs. Norwood, because I think it is excellent reporting of facts. However, I personally—and this is only an observation, nothing to do with your testimony—I don't see anything that we are doing in reaction to the problems that seem to be developing. We know that gasoline prices are rising and we are not moving to have an energy policy of any kind, although other nations are. And yet we seem to be waiting for them to rise and create problems. We are not reacting to that.

We know that productivity is at a very low rate. And yet we have not, in all of the budget process that we have gone through in the last several months, looked at all to address the problem of how to increase productivity to make us more competitive.

We know that our infrastructure is deteriorating at a very rapid pace, but we are doing nothing about that. Another several years will mean that it will be a lot more costly to handle.

All of these problems seem to be converging. I think the overall data indicate that they are creating very difficult problems as well. And yet, I have seen in several months of negotiation, summit meetings and all that, nothing that directly addresses the fundamental causes or anything that would lead us to be optimistic that there is any response to the problems that seem to be developing.

And yet we have the Council of Economic Advisers that I had always assumed would be on top of things—not to wait until you come back to us another month and let us know whether the unemployment rate has improved or has not—but to have something in place to address these problems.

There are some real serious problems out in communities in terms of job losses. And yet, when we dealt with the Job Training Partnership Act, which is the only employment program that we have on the statute books outside of the Job Corps, that was defeated in the Senate, which means that we don't really have any employment program to address the job losses. That is the fragility which seems to characterize this, and that causes me to be always troubled because I don't see any response to anything. We seem to be waiting for something to happen and then saying how bad it is. And as I said, that is getting into policy questions. And I appreciate that you would not want to comment on those. And I don't know how to frame a question to have you answer, because it would get us into policy.

But you have not indicated anything specific as to whether or not we even have a recession or whether one is likely, how deep it will be, if anything is being done to address it, or who is accountable for addressing it. You can tell us next month whether we have improved, but the point is that there's nobody responsible for seeing that any improvement takes place. Not even the Congress, it seems to me, addressed this in its budget process. And I voted for the final passage of the budget package, which may be one of the worst votes I have ever cast or it could be something to improve the situation.

But I saw nothing that would lead to any improvement. The premise seems to be that we're spending too much money and that we have to somehow cut back spending, which reduces demand, obviously, both public and private spending. But it certainly will not improve the employment rate. And yet we go on doing it without addressing the merit of whether it should or shouldn't be done. Let me stop there. I think I'm getting a little too far afield.

Representative SOLARZ. We, of course, can ask many more questions, but we do have another panel to appear before the committee. We can take comfort from the fact that you will be back next month, and we can resume this dialogue on that occasion.

Mrs. NORWOOD. We will. Thank you very much.

Representative SOLARZ. Thank you very much for coming. And remember to vote on Tuesday.

Mrs. NORWOOD. I always do.

[Whereupon, at 10:22 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, DECEMBER 7, 1990

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The committee met, pursuant to notice, at 9:30 a.m., in room 2359, Rayburn House Office Building, Hon. Lee H. Hamilton (chairman of the commmittee) presiding.

Present: Representatives Hamilton and Upton; and Senator Sarbanes.

Also present: Joseph J. Minarik, executive director; Stephen Quick, chief economist; and William Buechner and Chris Frenze, professional staff members.

OPENING STATEMENT OF REPRESENTATIVE HAMILTON, CHAIRMAN

Representative HAMILTON. The Joint Economic Committee will come to order.

Commissioner Norwood, I'm pleased to welcome you and your colleagues before the Joint Economic Committee this morning for your testimony on the employment and unemployment situation in November.

The figures you bring us this morning for November are cause for very serious concern about the direction of the economy; 450,000 people reported losing their jobs last month, the unemployment rate rose to 5.9 percent and payroll employment declined by 265,000.

Since June, more than a million people have reported losing their jobs. The downturn that began a couple of months ago seems to be taking a turn for the worse.

Before hearing your testimony, I'd like to comment on a major anniversary for the American statistical system. The data you report to Congress, to the Joint Economic Committee, are drawn from the current population survey, which the Census Bureau and the Bureau of Labor Statistics launched 50 years ago to provide the Nation with systematic and reliable information on the strength of our economy and our employment situation.

On this 50th anniversary to the current population survey, I want to let you know how much we at the Joint Economic Committee appreciate your good work and how much we rely on the information you present each month from this survey.

You have a great task ahead of you to keep the survey current with the rapid changes that are occurring in our economy, but we have every confidence that you and your colleagues at the Bureau of Labor Statistics will meet that important challenge.

Congressman Upton, do you have a statement?

OPENING STATEMENT OF REPRESENTATIVE UPTON

Representative **Upton**. I have a very brief statement. It's always a pleasure to join in welcoming Commissioner Norwood and her colleagues before the committee. Unfortunately, the unemployment data—or employment data, I guess they should be—released today are not good news. The employment declines in November as well as October are consistent with other recently released data reflecting economic weakness.

It appears that there is a good chance that the expansion has ended and, in fact, the recession has begun. Some of us have warned in recent months that policies to increase the tax and regulatory burdens on American workers and businesses could not have been more poorly timed. While these policies would always impose economic costs, their impact will be magnified by a vulnerable economy.

In the coming months, it will be interesting to examine whether the direction of Federal policy is consistent with current economic conditions.

Thank you.

Representative **Hamilton**. Thank you, Congressman Upton.

The committee will now turn to Commissioner Norwood for her summary and analysis of the November job situation.

You may proceed however you wish.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS; AND THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS

Mrs. **Norwood**. Thank you very much, Mr. Chairman. As usual, I have with me Kenneth Dalton on my right, and Tom Plewes on my left. We are very pleased to be here.

The job market conditions worsened considerably in November. Employment declined sharply, and the declines were widespread throughout both the goods and the service sectors of the economy. The unemployment rate rose from 5.7 to 5.9 percent. The rate is now more than half a point higher than it was during the first half of the year.

The number of payroll jobs declined sharply for the second month in a row. A reduction of 265,000 jobs in November followed a loss of 180,000 in October. We have not had consecutive job losses of this magnitude since the end of 1982.

Three-quarters of the November reduction occurred in the already weak manufacturing industry. Nearly 800,000 factory jobs have been dropped since January 1989. Although the November factory job cuts were widespread, they were especially sharp in durable goods manufacturing, where every one of our published industries lost jobs. The automobile industry was particularly hard hit, with some 55,000 workers temporarily laid off as a result of cutbacks in production in the face of slumping sales. Layoffs also occurred in supplier industries for auto manufacturing, such as fabricated metal products, rubber and plastics products and apparel and other textile products. Other manufacturing industries sustaining large employment declines in November included industrial machinery, electronic equipment, lumber, and furniture.

In addition to the large number of factory workers who were laid off, most of those who remained employed worked fewer hours. The factory workweek was cut back to 40.5 hours, down two-tenths of an hour in November and half an hour over the past 2 months. Factory overtime hours have also been edging down over the past few months.

The construction industry lost 60,000 jobs in November. The industry has lost 250,000 jobs over the past 6 months. We are, however, beginning to see a few new jobs in the oil and gas industry. Even service-sector jobs were affected in November. In retail trade, seasonal hiring for the Christmas period fell short of expectations, and, after seasonal adjustment, employment was down by 70,000. Wholesale trade employment fell by some 10,000 and has decreased by 40,000 over the past 3 months.

Job losses also occurred in the finance and real estate industries; the sharp drop in real estate sales in most of the Nation's housing markets continues to have an impact on employment.

In spite of these widespread declines, the number of jobs in the health services industry continued to increase. Three-quarters of the November increase of 80,000 jobs in the services industry was in health services. That industry has added more than 600,000 jobs, an increase of about 8 percent over the past year alone.

In contrast, the important business services industry, whose growth began to moderate early in 1989, lost 20,000 jobs in November.

The pervasive nature of November job losses is illustrated by the BLS diffusion index of employment change, which showed again that substantially more industries lost jobs than gained them. This index has declined in each of the last 4 months and, in November, was the lowest since November 1982.

Employment, as measured by the household survey, also showed a large decline from October. Total civilian employment was down by 450,000. Although this decline was widespread across the major age-sex groups, most of the employment decline occurred among adult women, whose employment-population ratio fell over the month to 54.5 percent; their ratio is down by a full percentage point from the June high.

The number of unemployed persons rose by nearly 300,000 in November to 7.4 million. This reflected an increase in the number of workers who had lost their last job; there was virtually no change in the number of jobless persons who had left their jobs voluntarily, or who were coming into the work force.

The recent increases in unemployment have occurred among both adult men and women. The jobless rate for adult men, at 5.4 percent in November, has risen by seven-tenths of a percentage point over the past 5 months, while the rate for adult women, at 5.1 percent, was up six-tenths of a point. The jobless rate for teenagers is, as you know, always much higher than for adults. About 1 out of every 16 workers was unemployed in November. Among black teenagers, the ratio was 1 out of 3.

In summary, the November labor market data show a substantial and widespread over-the-month deterioration. Employment fell sharply and in nearly every industry. There were especially large job losses in manufacturing and construction, as well as marked cutbacks within the service-producing sector.

The only industry with substantial employment growth was health services. Unemployment rose to 5.9 percent of the labor force.

We would all be glad to try to answer any questions.

[The table attached to Mrs. Norwood's statement, together with the Employment Situation press release, follows:]

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unad-justed rate	X-11 ARIMA method							X-11 method (official method before 1980)	Range (cols. 2-9)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual	12-month extrapola-tion		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1989										
November....	5.2	5.3	5.3	5.3	5.4	5.4	5.4	5.3	5.4	.1
December....	5.1	5.3	5.3	5.3	5.3	5.4	5.4	5.3	5.4	.1
1990										
January.....	5.9	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
February....	5.8	5.3	5.3	5.3	5.3	5.3	5.2	5.3	5.3	.1
March.......	5.4	5.2	5.2	5.3	5.2	5.2	5.1	5.2	5.2	.2
April.......	5.2	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	-
May.........	5.1	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.2	.1
June........	5.3	5.2	5.2	5.3	5.1	5.2	5.2	5.2	5.1	.2
July........	5.5	5.5	5.4	5.5	5.4	5.4	5.5	5.5	5.5	.1
August......	5.4	5.6	5.6	5.6	5.6	5.6	5.5	5.6	5.6	.1
September...	5.5	5.7	5.6	5.7	5.7	5.7	5.6	5.7	5.7	.1
October.....	5.4	5.7	5.6	5.7	5.7	5.7	5.7	5.7	5.7	.1
November....	5.8	5.9	5.8	5.8	6.0	5.9	6.0	5.9	5.9	.2

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
December 1990

(1) *Unadjusted rate*. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) *Official procedure (X-11 ARIMA method)*. The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components—agricultural employment, nonagricultural employment and unemployment—for 4 age-sex groups—males and females, ages 16-19 and 20 years and over—are seasonally adjusted independently using data from January 1974 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of *Employment and Earnings*.

(3) *Concurrent (as first computed, X-11 ARIMA method)*. The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1984 would be based, during 1984, on the adjustment of data from the period January 1974 through January 1984.

(4) *Concurrent (revised, X-11 ARIMA method)*. The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) *Stable (X-11 ARIMA method)*. Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) *Total (X-11 ARIMA method)*. This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extenced with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) *Residual (X-11 ARIMA method)*. This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) *12-month extrapolation (X-11 ARIMA method)*. This approach is the same as the official procedure except that the factors are extrapolated in 12-month intervals. The factors for January-December of the current year are computed at the beginning of the year based on data through the preceding year. The values for January through June of the current year are the same as the official values since they reflect the same factors.

(9) *X-11 method (official method before 1980)*. The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in *The X-11 ARIMA Seasonal Adjustment Method*, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in *X-11 Variant of the Census Method II Seasonal Adjustment Program*, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

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THE EMPLOYMENT SITUATION: NOVEMBER 1990

Employment fell sharply in November and unemployment rose, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The civilian worker unemployment rate increased from 5.7 to 5.9 percent.

Nonfarm payroll employment declined by 265,000, as manufacturing, construction, and retail trade were particularly hard hit. The household survey reflected similar weakness, with a decline of 450,000 in November.

Unemployment (Household Survey Data)

The number of unemployed persons rose about 300,000 to 7.4 million in November, and the civilian worker unemployment rate increased to 5.9 percent. It had been 5.7 percent in both September and October and was 5.2 percent as recently as June. (See table A-2.) November's unemployment rate was the highest since October 1987, when it was 6.0 percent.

Most of the increase in joblessness in November occurred among adult men. Their unemployment rate rose by 0.3 percentage point to 5.4 percent and has been trending upward since midyear. Unemployment rates for other major worker groups in November--adult women (5.1 percent), teenagers (16.5 percent), whites (5.1 percent), blacks (12.4 percent), and Hispanics (8.6 percent)--were also generally up in recent months. (See tables A-2 and A-3.)

Reflecting the escalating pace of factory job cutbacks, the unemployment rate for manufacturing workers rose nearly a percentage point in November, to 6.6 percent. The rate for construction workers, which has been inching up for several months, reached 13.6 percent. (See table A-6.)

The number of job losers, who now make up more than half of the unemployed, increased by almost 300,000 over the month and was nearly 700,000 higher than in June. November's increase resulted from a rise in both the number of permanent job losers and those who expected to be recalled from layoff. Increases occurred in both the newly unemployed--those jobless for less than 5 weeks--and in the very long-term unemployed--those jobless for 27 weeks or longer. The number of workers who would prefer full-time work but were employed part time due to slack work increased by nearly 200,000. (See tables A-4, A-7, and A-8.)

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			Oct.-Nov. change
	1990		1990			
	II	III	Sept.	Oct.	Nov.	
HOUSEHOLD DATA	Thousands of persons					
Labor force 1/........	126,550	126,421	126,568	126,354	126,231	-123
Total employment 1/.	119,927	119,459	119,499	119,281	118,876	-405
Civilian labor force..	124,908	124,798	124,967	124,784	124,616	-168
Civilian employment.	118,285	117,836	117,898	117,711	117,261	-450
Unemployment........	6,623	6,962	7,069	7,073	7,355	282
Not in labor force....	62,916	63,468	63,434	63,741	64,081	340
Discouraged workers.	893	835	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/	5.2	5.5	5.6	5.6	5.8	0.2
All civilian workers	5.3	5.6	5.7	5.7	5.9	.2
Adult men.........	4.8	5.0	5.1	5.1	5.4	.3
Adult women.......	4.6	4.8	5.0	4.9	5.1	.2
Teenagers.........	14.8	16.2	15.5	16.2	16.5	.3
White.............	4.6	4.8	4.8	4.9	5.1	.2
Black.............	10.4	11.7	12.1	11.8	12.4	.6
Hispanic origin...	7.6	8.1	8.7	8.1	8.6	.5
ESTABLISHMENT DATA	Thousands of jobs					
Nonfarm employment....	110,541	110,655	110,612	p110,434	p110,167	p-267
Goods-producing.....	25,178	25,016	24,931	p24,779	p24,524	p-255
Service-producing...	85,363	85,639	85,681	p85,655	p85,643	p-12
	Hours of work					
Average weekly hours:						
Total private.......	34.6	34.6	34.7	p34.2	p34.4	p0.2
Manufacturing.......	40.9	41.0	41.0	p40.7	p40.5	p-.2
Overtime..........	3.7	3.7	3.7	p3.6	p3.5	p-.1

1/ Includes the resident Armed Forces. p=preliminary.
N.A.=not available.

Civilian Employment and the Labor Force (Household Survey Data)

Total civilian employment declined by 450,000 to 117.3 million in November and has been trending downward since June. Employment among teenagers has been declining even longer--since March--and continued to trend downward in November. Most of the over-the-month losses were attributable to adult women. The proportion of the working-age population that is employed (the employment-population ratio) was 62.1 percent in November. This ratio had been holding at around 63.0 percent in 1989 and in the first half of 1990. (See tables A-2 and A-3.)

The civilian labor force was little changed at 124.6 million. As the working-age population continued to increase, the labor force participation rate edged down to 66.0 percent in November and is down by more than half a percentage point since May. Most of this decline in participation has occurred among teenagers, but there has also been a small reduction among adult women, whose participation rate has been trending upward historically. (See table A-2.)

Industry Payroll Employment (Establishment Survey Data)

Nonfarm payroll employment showed marked deterioration in November with a decline of 265,000. This came on the heels of a drop of 180,000 for October, as revised. Exceptionally large job losses occurred in manufacturing, particularly in durable goods. Also, construction and retail trade had substantial declines for the second month in a row, and weakness was evident in most other industries. Only mining and the services industry added jobs over the month. (See table B-1.)

The decline in manufacturing totaled 200,000, as reductions were widespread throughout the industry. The largest decline occurred in motor vehicle manufacturing, where employment had been inching down since July. November's drop in this industry (55,000) reflected the temporary shutdowns of plants to avoid excessive inventory buildup. Employment also fell in several other industries that supply materials for auto manufacturing such as fabricated metals, rubber and plastics, and apparel and other textile products. Elsewhere in manufacturing, employment decreased substantially in industrial machinery and electronic equipment, about 15,000 each, and in industries tied to the slumping construction industry such as lumber and furniture. In total, manufacturing has now lost more than three-quarters of a million jobs since the peak level of January 1989.

The construction industry, which has been trending downward since spring, lost 60,000 jobs in November, following an even larger drop in October. In the last 6 months, the industry has shed about a quarter of a million jobs, with general building contractors (particularly residential) suffering disproportionately large losses. In mining, there was a 5,000 job gain in November, mainly in oil and gas extraction, which is reacting to the rise in fuel prices.

Widespread weakness was also evident in the service-producing sector. Seasonal hirings have been far short of normal in retail trade this fall. In November, employment in the industry fell by 70,000, after seasonal adjustment, following a drop of 55,000 in October; general merchandise stores accounted for the bulk of the declines. Employment also fell in wholesale trade and in finance, insurance, and real estate. Job losses in wholesale trade, which is closely tied to manufacturing and construction, have totaled 40,000 since August.

Employment in the services industry rose by 80,000 in November, with gains confined principally to health services and social services. Business services, which has been especially weak since June, declined by about 20,000 over the month.

Weekly Hours (Establishment Survey Data)

The average workweek for production or nonsupervisory workers on private nonfarm payrolls rose by 0.2 hour in November to 34.4 hours, seasonally adjusted, but this followed a decline of 0.5 hour in October. The manufacturing workweek decreased by 0.2 hour to 40.5 hours, and factory overtime edged down 0.1 hour to 3.5 hours. The factory workweek has declined by half an hour since September. (See table B-2.)

The index of aggregate weekly hours of private production or nonsupervisory workers was little changed in November at 123.4 (1982=100), seasonally adjusted. The index for manufacturing, at 103.6, declined by 1.8 percent over the month, reflecting the drops in both employment and hours. This index has fallen by 3.9 percent over the past year. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls were essentially unchanged in November. Average weekly earnings rose by 0.7 percent, seasonally adjusted, as a result of the partial rebound in hours. Prior to seasonal adjustment, average weekly earnings edged down to $348.49. Over the year, average hourly earnings increased by 3.6 percent and average weekly earnings by 3.0 percent. (See tables B-3 and B-4.)

The Employment Situation for December 1990 will be released on Friday, January 4, 1991, at 8:30 A.M. (EST).

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

[Numbers in thousands]

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	Nov. 1989	Oct. 1990	Nov. 1990	Nov. 1989	July 1990	Aug. 1990	Sept. 1990	Oct. 1990	Nov. 1990
TOTAL									
Noninstitutional population[2]	188,721	190,086	190,312	188,721	189,763	189,901	190,002	190,086	190,312
Labor force[2]	126,368	126,590	126,436	126,192	126,394	126,300	126,569	126,354	126,231
Participation rate[3]	67.0	66.6	66.4	66.9	66.6	66.5	66.6	66.5	66.3
Total employed[2]	119,872	119,869	119,226	119,540	119,580	119,298	119,499	119,281	118,876
Employment-population ratio[4]	63.5	63.1	62.6	63.3	63.0	62.8	62.9	62.7	62.5
Resident Armed Forces	1,704	1,570	1,615	1,704	1,627	1,640	1,601	1,570	1,615
Civilian employed	118,168	118,299	117,611	117,836	117,953	117,658	117,898	117,711-	117,261
Agriculture	3,033	3,280	3,056	3,160	3,085	3,137	3,181	3,167	3,190
Nonagricultural industries	115,135	115,018	114,555	114,676	114,867	114,521	114,717	114,545	114,071
Unemployed	6,496	6,722	7,211	6,652	6,814	7,003	7,069	7,073	7,355
Unemployment rate[5]	5.1	5.3	5.7	5.3	5.4	5.5	5.6	5.6	5.8
Not in labor force	62,353	63,505	63,875	62,529	63,369	63,601	63,434	63,741	64,081
Men, 16 years and over									
Noninstitutional population[2]	90,606	91,290	91,440	90,606	91,198	91,240	91,271	91,290	91,440
Labor force[2]	69,394	69,610	69,656	69,635	69,544	69,458	69,809	69,780	69,874
Participation rate[3]	76.6	76.2	76.2	76.9	76.3	76.1	76.5	76.4	76.4
Total employed[2]	65,831	66,010	65,590	66,011	65,740	65,596	65,867	65,862	65,759
Employment-population ratio[4]	72.7	72.3	71.7	72.9	72.1	71.9	72.2	72.1	71.9
Resident Armed Forces	1,529	1,414	1,453	1,529	1,462	1,475	1,441	1,414	1,453
Civilian employed	64,302	64,596	64,137	64,482	64,278	64,121	64,426	64,448	64,306
Unemployed	3,563	3,600	4,067	3,624	3,804	3,863	3,943	3,918	4,116
Unemployment rate[5]	5.1	5.2	5.8	5.2	5.5	5.6	5.6	5.6	5.9
Women, 16 years and over									
Noninstitutional population[2]	98,115	98,796	98,872	98,115	98,565	98,661	98,731	98,796	98,872
Labor force[2]	56,974	56,980	56,780	56,557	56,849	56,842	56,758	56,575	56,357
Participation rate[3]	58.1	57.7	57.4	57.6	57.7	57.6	57.5	57.3	57.0
Total employed[2]	54,041	53,858	53,636	53,529	53,839	53,702	53,632	53,419	53,117
Employment-population ratio[4]	55.1	54.5	54.2	54.6	54.6	54.4	54.3	54.1	53.7
Resident Armed Forces	175	156	162	175	165	165	160	156	162
Civilian employed	53,866	53,702	53,474	53,354	53,674	53,537	53,472	53,263	52,955
Unemployed	2,933	3,122	3,144	3,028	3,010	3,140	3,126	3,156	3,240
Unemployment rate[5]	5.1	5.5	5.5	5.4	5.3	5.5	5.5	5.6	5.7

[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

Note on resident Armed Forces estimates

Beginning with data for November, estimates of the number of persons in the resident Armed Forces reflect newly available information from the Department of Defense accounting for Armed Forces personnel deployed from the United States to the Persian Gulf. The new information suggests that the numbers of the resident Armed Forces as published for September and October are slightly understated.

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted[1]					
	Nov. 1989	Oct. 1990	Nov. 1990	Nov. 1989	July 1990	Aug. 1990	Sept. 1990	Oct. 1990	Nov. 1990
TOTAL									
Civilian noninstitutional population	187,017	188,525	188,687	187,017	188,136	188,261	188,401	188,525	188,687
Civilian labor force	124,664	125,020	124,821	124,488	124,767	124,689	124,967	124,784	124,616
Participation rate	66.7	66.3	66.1	66.6	66.3	66.2	66.3	66.2	66.0
Employed	118,168	118,298	117,611	117,836	117,953	117,686	117,868	117,711	117,261
Employment-population ratio[2]	63.2	62.7	62.3	63.0	62.7	62.5	62.6	62.4	62.1
Unemployed	6,496	6,722	7,211	6,652	6,814	7,003	7,099	7,073	7,355
Unemployment rate	5.2	5.4	5.8	5.3	5.5	5.6	5.7	5.7	5.9
Men, 20 years and over									
Civilian noninstitutional population	81,968	83,013	83,082	81,968	82,780	82,862	82,940	83,013	83,082
Civilian labor force	63,919	64,583	64,622	63,967	64,344	64,362	64,573	64,559	64,650
Participation rate	78.0	77.8	77.8	78.0	77.7	77.7	77.9	77.8	77.8
Employed	61,033	61,606	61,200	61,033	61,196	61,143	61,264	61,270	61,186
Employment-population ratio[2]	74.5	74.2	73.7	74.5	73.9	73.8	73.9	73.8	73.6
Agriculture	2,248	2,371	2,261	2,292	2,262	2,246	2,296	2,271	2,306
Nonagricultural industries	58,786	59,235	58,939	58,741	58,934	58,897	58,968	58,999	58,880
Unemployed	2,887	2,977	3,422	2,934	3,148	3,219	3,309	3,289	3,464
Unemployment rate	4.5	4.6	5.3	4.6	4.9	5.0	5.1	5.1	5.4
Women, 20 years and over									
Civilian noninstitutional population	90,952	91,857	91,963	90,952	91,581	91,698	91,765	91,857	91,963
Civilian labor force	53,117	53,533	53,394	52,541	53,211	53,315	53,121	52,983	52,830
Participation rate	58.4	58.3	58.1	57.8	58.1	58.1	57.9	57.7	57.4
Employed	50,687	50,915	50,751	50,043	50,719	50,699	50,489	50,370	50,119
Employment-population ratio[2]	55.7	55.4	55.2	55.0	55.4	55.3	55.0	54.8	54.5
Agriculture	612	666	609	624	585	639	619	619	621
Nonagricultural industries	50,075	50,249	50,142	49,419	50,135	50,060	49,870	49,752	49,498
Unemployed	2,430	2,618	2,643	2,498	2,492	2,616	2,632	2,613	2,711
Unemployment rate	4.6	4.9	5.0	4.8	4.7	4.9	5.0	4.9	5.1
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,097	13,656	13,642	14,097	13,764	13,711	13,696	13,656	13,642
Civilian labor force	7,628	6,895	6,805	7,980	7,212	6,983	7,272	7,243	7,138
Participation rate	54.1	50.5	49.9	56.6	52.4	50.9	53.1	53.0	52.3
Employed	6,449	5,777	5,660	6,760	6,038	5,815	6,144	6,071	5,957
Employment-population ratio[2]	45.7	42.3	41.5	48.0	43.9	42.4	44.9	44.5	43.7
Agriculture	173	243	186	244	239	251	266	277	265
Nonagricultural industries	6,275	5,534	5,474	6,516	5,799	5,564	5,878	5,794	5,692
Unemployed	1,179	1,117	1,145	1,220	1,174	1,168	1,128	1,172	1,181
Unemployment rate	15.5	16.2	16.8	15.3	16.3	16.7	15.5	16.2	16.5

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[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Nov. 1989	Oct. 1990	Nov. 1990	Nov. 1989	July 1990	Aug. 1990	Sept. 1990	Oct. 1990	Nov. 1990
WHITE									
Civilian noninstitutional population	159,736	160,717	160,831	159,736	160,468	160,580	160,640	160,717	160,831
Civilian labor force	106,907	107,362	107,013	106,834	107,230	107,135	107,451	107,238	106,942
Participation rate	66.9	66.8	66.5	66.9	66.8	66.7	66.9	66.7	66.5
Employed	102,167	102,452	101,739	101,991	102,260	101,968	102,260	102,013	101,536
Employment-population ratio[2]	64.0	63.7	63.3	63.8	63.7	63.5	63.7	63.5	63.1
Unemployed	4,740	4,910	5,274	4,843	4,970	5,167	5,190	5,225	5,406
Unemployment rate	4.4	4.6	4.9	4.5	4.6	4.8	4.8	4.9	5.1
Men, 20 years and over									
Civilian labor force	55,632	56,119	56,101	55,676	55,895	56,035	56,144	56,111	56,143
Participation rate	78.4	78.3	78.2	78.5	78.1	78.3	78.4	78.3	78.2
Employed	53,457	53,900	53,536	53,482	53,576	53,613	53,721	53,632	53,536
Employment-population ratio[2]	75.4	75.2	74.6	75.4	74.9	74.9	75.0	74.8	74.6
Unemployed	2,174	2,219	2,565	2,194	2,318	2,423	2,423	2,479	2,607
Unemployment rate	3.9	4.0	4.6	3.9	4.1	4.3	4.3	4.4	4.6
Women, 20 years and over									
Civilian labor force	44,809	45,302	45,098	44,360	45,120	45,100	45,000	44,888	44,650
Participation rate	57.9	58.0	57.7	57.3	57.9	57.9	57.7	57.5	57.2
Employed	43,094	43,441	43,210	42,586	43,321	43,227	43,112	43,011	42,698
Employment-population ratio[2]	55.7	55.7	55.3	55.0	55.6	55.5	55.3	55.1	54.7
Unemployed	1,715	1,862	1,888	1,774	1,799	1,873	1,888	1,877	1,952
Unemployment rate	3.8	4.1	4.2	4.0	4.0	4.2	4.2	4.2	4.4
Both sexes, 16 to 19 years									
Civilian labor force	6,467	5,941	5,813	6,798	6,216	5,999	6,306	6,239	6,149
Participation rate	56.8	54.2	53.1	59.7	56.1	54.3	57.3	56.9	56.2
Employed	5,616	5,111	4,992	5,923	5,363	5,128	5,427	5,370	5,302
Employment-population ratio[2]	49.3	46.6	45.6	52.0	48.4	46.4	49.3	49.0	48.5
Unemployed	851	829	821	875	853	871	879	869	847
Unemployment rate	13.2	14.0	14.1	12.9	13.7	14.5	13.9	13.9	13.8
Men	14.8	15.0	15.8	14.3	15.1	15.7	15.3	14.8	15.0
Women	11.5	12.8	12.3	11.3	12.3	13.2	12.5	13.0	12.3
BLACK									
Civilian noninstitutional population	21,136	21,383	21,417	21,136	21,318	21,337	21,361	21,383	21,417
Civilian labor force	13,614	13,497	13,608	13,576	13,379	13,366	13,470	13,493	13,563
Participation rate	64.4	63.1	63.5	64.2	62.8	62.6	63.1	63.1	63.3
Employed	12,056	11,957	11,969	11,954	11,870	11,791	11,839	11,903	11,881
Employment-population ratio[2]	57.0	55.9	55.9	56.6	55.7	55.3	55.4	55.7	55.5
Unemployed	1,558	1,539	1,639	1,622	1,510	1,575	1,631	1,590	1,683
Unemployment rate	11.4	11.4	12.0	11.9	11.3	11.8	12.1	11.8	12.4
Men, 20 years and over									
Civilian labor force	6,230	6,339	6,348	6,247	6,293	6,235	6,330	6,351	6,356
Participation rate	74.0	74.1	74.3	74.2	73.9	73.1	74.1	74.3	74.4
Employed	5,599	5,670	5,637	5,587	5,617	5,572	5,580	5,631	5,626
Employment-population ratio[2]	66.5	66.3	66.0	66.4	65.9	65.4	65.3	65.8	65.9
Unemployed	631	668	711	660	676	663	750	721	730
Unemployment rate	10.1	10.5	11.2	10.6	10.7	10.6	11.8	11.3	11.5
Women, 20 years and over									
Civilian labor force	6,480	6,389	6,452	6,373	6,328	6,358	6,361	6,335	6,359
Participation rate	61.4	59.7	60.2	60.4	59.4	59.6	59.5	59.2	59.3
Employed	5,835	5,762	5,808	5,722	5,735	5,730	5,705	5,722	5,711
Employment-population ratio[2]	56.3	53.9	54.2	54.2	53.8	53.7	53.4	53.5	53.3
Unemployed	645	626	644	651	592	628	656	613	648
Unemployment rate	10.0	9.8	10.0	10.2	9.4	9.9	10.3	9.7	10.2
Both sexes, 16 to 19 years									
Civilian labor force	904	769	809	956	758	773	779	807	848
Participation rate	41.6	36.1	37.5	44.0	35.4	36.1	36.5	37.9	39.4
Employed	622	526	524	645	517	489	554	550	544
Employment-population ratio[2]	28.7	24.7	24.3	29.7	24.1	22.8	25.9	25.8	25.3
Unemployed	282	243	285	311	241	284	225	257	304
Unemployment rate	31.2	31.6	35.2	32.5	31.8	36.7	28.9	31.8	35.8
Men	31.8	31.0	33.1	32.3	32.3	38.4	30.6	30.7	33.5
Women	30.4	32.2	37.7	32.7	31.2	35.0	26.9	33.1	38.5

See footnotes at end of table.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin—Continued

[Numbers in thousands]

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Nov. 1989	Oct. 1990	Nov. 1990	Nov. 1989	July 1990	Aug. 1990	Sept. 1990	Oct. 1990	Nov. 1990
HISPANIC ORIGIN									
Civilian noninstitutional population	13,977	14,435	14,474	13,977	14,317	14,358	14,398	14,435	14,474
Civilian labor force	9,473	9,553	9,508	9,424	9,665	9,707	9,643	9,567	9,452
Participation rate	67.8	66.2	65.7	67.4	67.5	67.6	67.0	66.2	65.3
Employed	8,719	8,818	8,682	8,672	8,898	8,951	8,808	8,793	8,639
Employment-population ratio[2]	62.4	61.1	60.0	62.0	62.2	62.3	61.2	60.9	59.7
Unemployed	754	735	826	752	767	757	835	774	813
Unemployment rate	8.0	7.7	8.7	8.0	7.9	7.8	8.7	8.1	8.6

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

[In thousands]

Category	Not seasonally adjusted			Seasonally adjusted					
	Nov. 1989	Oct. 1990	Nov. 1990	Nov. 1989	July 1990	Aug. 1990	Sept. 1990	Oct. 1990	Nov. 1990
CHARACTERISTIC									
Civilian employed, 16 years and over	118,166	118,258	117,611	117,836	117,863	117,660	117,688	117,711	117,261
Married men, spouse present	40,858	41,156	40,957	40,886	40,545	40,804	40,819	40,870	40,875
Married women, spouse present	30,196	30,158	30,036	29,767	29,909	29,949	29,780	29,772	29,821
Women who maintain families	6,420	6,369	6,401	6,351	6,380	6,366	6,362	6,342	6,325
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,590	1,780	1,586	1,667	1,626	1,666	1,808	1,743	1,677
Self-employed workers	1,343	1,266	1,352	1,373	1,377	1,357	1,278	1,330	1,380
Unpaid family workers	100	84	108	122	96	93	112	96	127
Nonagricultural industries:									
Wage and salary workers	106,241	105,734	105,451	105,960	105,885	105,691	105,800	105,337	105,039
Government	18,042	17,944	17,981	17,681	17,798	17,842	17,555	17,679	17,611
Private industries	88,199	87,790	87,469	88,279	88,087	87,849	88,245	87,658	87,428
Private households	1,039	1,030	962	1,051	981	1,033	1,074	1,005	967
Other industries	87,160	86,760	86,467	87,228	87,106	86,816	87,171	86,653	86,462
Self-employed workers	8,645	9,049	8,863	8,528	8,709	8,629	8,810	8,880	8,775
Unpaid family workers	249	236	241	284	280	229	235	241	280
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	4,737	5,062	5,357	4,809	4,870	5,036	5,366	5,462	5,450
Slack work	2,374	2,522	2,861	2,297	2,866	2,424	2,864	2,627	2,787
Could only find part-time work	2,064	2,172	2,230	2,162	2,070	2,123	2,462	2,403	2,377
Voluntary part time	16,437	16,042	16,149	15,284	15,311	15,377	15,283	15,105	14,963
Nonagricultural industries:									
Part time for economic reasons	4,466	4,788	5,082	4,562	4,710	4,780	5,093	5,182	5,301
Slack work	2,175	2,324	2,886	2,132	2,408	2,242	2,481	2,436	2,645
Could only find part-time work	2,008	2,114	2,181	2,087	2,048	2,088	2,366	2,333	2,296
Voluntary part time	16,035	15,626	15,762	14,806	14,822	14,889	14,898	14,888	14,558

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1989		1990			1990		
	III	IV	I	II	III	Sept.	Oct.	Nov.
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.1	1.1	1.1	1.1	1.2	1.2	1.3	1.4
U-2 Job losers as a percent of the civilian labor force	2.4	2.5	2.5	2.5	2.7	2.8	2.8	3.1
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force for persons 25 years and over	4.0	4.1	4.2	4.1	4.4	4.5	4.4	4.8
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	5.0	5.0	4.9	5.0	5.2	5.4	5.5	5.7
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	5.2	5.3	5.2	5.2	5.5	5.6	5.6	5.8
U-5b Total unemployed as a percent of the civilian labor force	5.3	5.3	5.2	5.3	5.6	5.7	5.7	5.9
U-6 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons as a percent of the civilian labor force less 1/2 of the part-time labor force	7.2	7.2	7.2	7.3	7.6	7.8	7.9	8.2
U-7 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less 1/2 of the part-time labor force	7.9	7.9	7.8	8.0	8.3	N.A.	N.A.	N.A.

N.A. = not available

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Nov. 1989	Oct. 1990	Nov. 1990	Nov. 1989	July 1990	Aug. 1990	Sept. 1990	Oct. 1990	Nov. 1990
CHARACTERISTIC									
Total, 16 years and over	6,652	7,073	7,386	5.3	5.5	5.6	5.7	5.7	5.9
Men, 16 years and over	3,624	3,916	4,116	5.3	5.6	5.7	5.8	5.7	6.0
Men, 20 years and over	2,634	3,280	3,464	4.8	4.9	5.0	5.1	5.1	5.4
Women, 16 years and over	3,028	3,156	3,240	5.4	5.3	5.5	5.5	5.6	5.8
Women, 20 years and over	2,498	2,613	2,711	4.8	4.7	4.8	5.0	4.9	5.1
Both sexes, 16 to 19 years	1,220	1,172	1,161	15.3	16.3	16.7	15.5	16.2	16.5
Married men, spouse present	1,298	1,462	1,613	3.1	3.3	3.5	3.4	3.6	3.8
Married women, spouse present	1,161	1,206	1,278	3.8	3.5	3.9	4.0	3.9	4.1
Women who maintain families	566	601	602	8.2	8.5	8.5	8.9	8.5	8.7
Full-time workers	5,301	5,847	6,081	5.0	5.0	5.2	5.4	5.5	5.7
Part-time workers	1,347	1,212	1,281	7.4	8.1	7.9	7.1	6.8	7.2
Labor force time lost[2]	—	—	—	5.9	6.0	6.3	6.4	6.6	6.8
INDUSTRY									
Nonagricultural private wage and salary workers	5,063	5,487	5,797	5.4	5.5	5.7	5.8	5.9	6.2
Goods-producing industries	1,870	2,107	2,326	6.3	6.6	6.9	7.0	7.3	8.0
Mining	46	27	37	6.2	4.4	4.9	3.8	3.7	4.9
Construction	620	834	864	9.8	10.2	11.1	11.8	13.2	13.6
Manufacturing	1,202	1,246	1,434	5.4	5.7	5.8	5.7	5.7	6.6
Durable goods	716	743	913	5.4	5.6	5.9	6.0	5.8	7.1
Nondurable goods	486	503	521	5.3	5.7	5.5	5.3	5.8	5.8
Service-producing industries	3,193	3,380	3,471	5.0	5.0	5.2	5.3	5.3	5.4
Transportation and public utilities	227	276	281	3.8	3.7	4.1	3.8	4.1	4.2
Wholesale and retail trade	1,535	1,609	1,610	6.4	6.0	6.2	6.6	6.7	6.8
Finance and service industries	1,431	1,495	1,581	4.3	4.5	4.7	4.7	4.4	4.6
Government workers	486	507	513	2.7	2.8	2.8	2.8	2.8	2.8
Agricultural wage and salary workers	232	156	179	12.1	10.6	9.7	9.2	9.2	9.7

[1] Unemployment as a percent of the civilian labor force

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Nov. 1989	Oct. 1990	Nov. 1990	Nov. 1989	July 1990	Aug. 1990	Sept. 1990	Oct. 1990	Nov. 1990
DURATION									
Less than 5 weeks	3,234	3,073	3,326	3,256	3,120	3,325	3,044	3,101	3,323
5 to 14 weeks	1,963	2,229	2,256	1,991	2,150	2,048	2,479	2,405	2,306
15 weeks and over	1,298	1,430	1,630	1,422	1,513	1,609	1,620	1,581	1,776
15 to 26 weeks	682	767	866	765	809	845	872	896	960
27 weeks and over	616	663	764	657	704	764	748	685	816
Average (mean) duration, in weeks	11.6	11.8	12.4	11.6	12.0	12.3	12.5	11.9	12.4
Median duration, in weeks	4.5	5.4	5.4	4.8	5.2	5.2	6.2	6.0	5.8
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	49.8	45.7	46.1	48.8	45.9	47.6	42.6	43.8	44.9
5 to 14 weeks	30.2	33.2	31.3	29.8	31.6	29.3	34.7	33.9	31.2
15 weeks and over	20.0	21.1	22.6	21.3	22.3	23.0	22.7	22.3	24.0
15 to 26 weeks	10.5	11.4	12.0	11.5	11.9	12.1	12.2	12.6	13.0
27 weeks and over	9.5	9.7	10.6	9.8	10.4	10.9	10.5	9.7	11.0

Table A-8. Reason for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted			Seasonally adjusted					
	Nov. 1989	Oct. 1990	Nov. 1990	Nov. 1989	July 1990	Aug. 1990	Sept. 1990	Oct. 1990	Nov. 1990
NUMBER OF UNEMPLOYED									
Job losers	3,023	3,109	3,741	3,092	3,089	3,367	3,511	3,533	3,815
On layoff	912	808	1,103	969	960	973	1,127	1,020	1,177
Other job losers	2,111	2,301	2,638	2,123	2,129	2,394	2,384	2,513	2,638
Job leavers	1,051	1,030	1,002	1,049	1,027	994	934	970	994
Reentrants	1,802	1,957	1,878	1,845	1,960	1,879	1,986	1,904	1,914
New entrants	619	625	587	695	687	677	656	693	666
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	46.5	46.3	51.9	46.3	45.7	48.7	49.5	49.8	51.7
On layoff	14.0	12.0	15.3	14.5	14.2	14.1	15.9	14.4	16.0
Other job losers	32.5	34.2	36.6	31.8	31.5	34.7	33.6	35.4	35.8
Job leavers	16.2	15.3	13.9	15.7	15.2	14.3	13.2	13.7	13.5
Reentrants	27.7	29.1	26.0	27.6	29.0	27.2	28.0	26.8	25.9
New entrants	9.5	9.3	8.1	10.4	10.2	9.8	9.3	9.8	8.9
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	2.4	2.5	3.0	2.5	2.5	2.7	2.8	2.8	3.1
Job leavers	.8	.8	.8	.8	.8	.8	.7	.8	.8
Reentrants	1.4	1.6	1.5	1.5	1.6	1.5	1.6	1.5	1.5
New entrants	.5	.5	.5	.6	.6	.5	.5	.6	.5

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Nov. 1989	Oct. 1990	Nov. 1990	Nov. 1989	July 1990	Aug. 1990	Sept. 1990	Oct. 1990	Nov. 1990
Total, 16 years and over	6,652	7,073	7,355	5.3	5.5	5.6	5.7	5.7	5.9
16 to 24 years	2,472	2,493	2,430	11.3	11.0	11.5	11.6	11.8	11.6
16 to 19 years	1,220	1,172	1,181	15.3	16.3	16.7	15.5	16.2	16.5
16 to 17 years	548	508	512	17.4	17.4	19.2	18.4	18.3	18.1
18 to 19 years	665	660	665	13.5	15.2	15.0	14.4	14.5	15.2
20 to 24 years	1,252	1,321	1,249	9.0	8.3	8.8	9.6	9.6	9.1
25 years and over	4,186	4,585	4,931	4.1	4.3	4.4	4.5	4.4	4.8
25 to 54 years	3,686	4,036	4,451	4.2	4.5	4.6	4.7	4.6	5.0
55 years and over	496	555	516	3.2	3.2	3.5	3.3	3.6	3.4
Men, 16 years and over	3,624	3,918	4,116	5.3	5.6	5.7	5.8	5.7	6.0
16 to 24 years	1,380	1,330	1,349	12.0	11.6	11.8	12.0	12.0	12.2
16 to 19 years	690	629	652	16.7	17.5	17.8	16.7	16.5	17.3
16 to 17 years	312	257	284	19.0	18.4	21.5	18.8	18.1	19.2
18 to 19 years	382	371	371	15.1	16.3	15.5	16.2	15.7	16.1
20 to 24 years	690	701	697	9.4	8.5	8.5	9.5	9.7	9.8
25 years and over	2,258	2,606	2,777	4.0	4.4	4.6	4.6	4.5	4.8
25 to 54 years	1,967	2,257	2,485	4.1	4.5	4.6	4.7	4.7	5.1
55 years and over	303	360	344	3.5	3.6	3.6	3.6	4.1	3.9
Women, 16 years and over	3,028	3,156	3,240	5.4	5.3	5.5	5.5	5.6	5.8
16 to 24 years	1,092	1,163	1,081	10.4	10.4	11.4	11.2	11.6	10.9
16 to 19 years	530	543	529	13.8	14.9	15.6	14.2	15.8	15.7
16 to 17 years	236	251	228	15.7	16.4	16.6	17.9	18.6	17.0
18 to 19 years	283	289	295	12.3	13.9	14.4	12.6	13.4	14.3
20 to 24 years	562	620	552	8.5	8.0	9.3	9.6	9.4	8.5
25 years and over	1,930	1,980	2,154	4.2	4.2	4.3	4.4	4.3	4.7
25 to 54 years	1,721	1,779	1,966	4.4	4.4	4.5	4.6	4.5	4.9
55 years and over	193	196	172	2.9	2.6	3.1	2.6	3.0	2.7

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[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	Nov. 1989	Oct. 1990	Nov. 1990	Nov. 1989	July 1990	Aug. 1990	Sept. 1990	Oct. 1990	Nov. 1990
Civilian noninstitutional population	27,280	27,808	27,866	27,280	27,668	27,711	27,761	27,808	27,866
Civilian labor force	17,757	17,658	17,808	17,686	17,448	17,498	17,527	17,614	17,741
Participation rate	65.1	63.5	63.9	64.8	63.1	63.1	63.1	63.3	63.7
Employed	16,002	15,846	15,872	15,861	15,655	15,671	15,629	15,746	15,752
Employment-population ratio[2]	58.7	57.0	57.0	58.1	56.6	56.6	56.3	56.6	56.5
Unemployed	1,755	1,811	1,936	1,825	1,793	1,826	1,897	1,868	1,989
Unemployment rate	9.9	10.3	10.9	10.3	10.3	10.4	10.8	10.6	11.2
Not in labor force	9,524	10,150	10,057	9,594	10,220	10,213	10,234	10,194	10,125

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[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	Nov. 1989	Nov. 1990	Nov. 1989	Nov. 1990	Nov. 1989	Nov. 1990
Total, 16 years and over¹	118,168	117,611	6,495	7,211	5.2	5.8
Managerial and professional specialty	30,727	30,858	625	630	2.0	2.0
Executive, administrative, and managerial	14,637	14,716	356	367	2.4	2.4
Professional specialty	16,090	16,142	269	264	1.6	1.6
Technical, sales, and administrative support	36,844	36,531	1,482	1,718	3.9	4.5
Technicians and related support	3,730	3,852	86	102	2.3	2.6
Sales occupations	14,393	13,976	645	791	4.3	5.4
Administrative support, including clerical	18,721	18,703	751	824	3.8	4.2
Service occupations	15,352	15,747	1,133	1,208	6.9	7.1
Private household	840	782	56	52	6.1	6.1
Protective service	1,917	1,972	68	80	3.4	3.9
Service, except private household and protective	12,596	12,993	1,009	1,076	7.4	7.7
Precision production, craft, and repair	14,124	13,494	694	942	4.7	6.5
Mechanics and repairers	4,566	4,389	139	200	2.9	4.4
Construction trades	5,358	5,108	403	537	7.0	9.5
Other precision production, craft, and repair	4,200	3,997	152	205	3.5	4.9
Operators, fabricators, and laborers	17,932	17,823	1,559	1,814	8.0	9.2
Machine operators, assemblers, and inspectors	8,174	8,081	690	758	7.8	8.6
Transportation and material moving occupations	4,913	5,025	276	332	5.3	6.2
Handlers, equipment cleaners, helpers, and laborers	4,845	4,718	592	724	10.9	13.3
Construction laborers	692	746	144	205	17.3	21.6
Other handlers, equipment cleaners, helpers, and laborers	4,153	3,971	448	518	9.7	11.5
Farming, forestry, and fishing	3,190	3,156	295	236	8.5	7.0

¹ Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Nov. 1989	Nov. 1990	Nov. 1989	Nov. 1990	Nov. 1989	Nov. 1990	Nov. 1989	Nov. 1990	Nov. 1989	Nov. 1990
VIETNAM-ERA VETERANS										
Total, 35 years and over	7,519	7,689	6,852	7,044	6,575	6,702	277	342	4.0	4.9
35 to 49 years	6,496	6,494	6,140	6,179	5,917	5,878	222	301	3.6	4.9
35 to 39 years	1,614	1,319	1,515	1,236	1,449	1,166	66	70	4.4	5.7
40 to 44 years	3,307	3,223	3,134	3,080	3,025	2,937	109	143	3.5	4.6
45 to 49 years	1,575	1,952	1,491	1,863	1,444	1,776	47	87	3.1	4.7
50 years and over	1,023	1,195	713	865	658	824	55	41	7.7	4.7
NONVETERANS										
Total, 35 to 49 years	16,615	17,812	15,650	16,767	15,063	15,985	587	782	3.8	4.7
35 to 39 years	7,814	8,137	7,246	7,746	6,943	7,361	303	385	4.2	5.0
40 to 44 years	4,643	5,474	4,575	5,143	4,430	4,948	145	195	3.2	3.8
45 to 49 years	4,158	4,202	3,829	3,879	3,690	3,676	139	203	3.6	5.2

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 35 to 49 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

Table A-13. Employment status of the civilian population for eleven large States

[Numbers in thousands]

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Nov. 1989	Oct. 1990	Nov. 1990	Nov. 1989	July 1990	Aug. 1990	Sept. 1990	Oct. 1990	Nov. 1990
California									
Civilian noninstitutional population	21,842	22,079	22,122	21,842	21,961	21,999	22,039	22,079	22,122
Civilian labor force	14,701	14,660	14,663	14,653	14,751	14,816	14,616	14,613	14,596
Employed	13,982	13,828	13,711	13,913	13,995	14,010	13,747	13,729	13,622
Unemployed	719	832	952	740	756	806	869	884	974
Unemployment rate	4.9	5.7	6.5	5.1	5.1	5.4	5.9	6.0	6.7
Florida									
Civilian noninstitutional population	9,979	10,188	10,209	9,979	10,132	10,150	10,169	10,188	10,209
Civilian labor force	6,237	6,475	6,460	6,258	6,313	6,366	6,460	6,454	6,487
Employed	5,890	6,076	6,052	5,905	5,953	5,939	6,061	6,054	6,076
Unemployed	347	399	408	353	360	426	399	400	411
Unemployment rate	5.6	6.2	6.3	5.6	5.7	6.7	6.0	6.2	6.3
Illinois									
Civilian noninstitutional population	8,849	8,885	8,890	8,849	8,876	8,878	8,882	8,885	8,890
Civilian labor force	6,068	6,044	6,056	6,085	6,102	5,954	6,008	6,034	6,044
Employed	5,684	5,698	5,697	5,699	5,691	5,568	5,573	5,676	5,682
Unemployed	384	346	359	386	411	386	435	358	362
Unemployment rate	6.3	5.7	5.9	6.3	6.7	6.5	7.2	5.9	6.0
Massachusetts									
Civilian noninstitutional population	4,619	4,620	4,621	4,619	4,620	4,620	4,621	4,620	4,621
Civilian labor force	3,140	3,116	3,108	3,165	3,157	3,171	3,187	3,136	3,134
Employed	3,013	2,930	2,903	3,025	2,963	2,960	2,988	2,937	2,915
Unemployed	127	186	205	140	194	211	199	199	219
Unemployment rate	4.0	6.0	6.6	4.4	6.1	6.7	6.2	6.3	7.0
Michigan									
Civilian noninstitutional population	6,961	7,004	7,006	6,961	7,001	7,002	7,003	7,004	7,006
Civilian labor force	4,660	4,563	4,545	4,626	4,614	4,599	4,568	4,524	4,499
Employed	4,338	4,236	4,218	4,297	4,271	4,237	4,237	4,191	4,154
Unemployed	322	327	326	330	343	362	331	333	345
Unemployment rate	6.9	7.2	7.2	7.3	7.4	7.9	7.2	7.4	7.7
New Jersey									
Civilian noninstitutional population	6,032	6,026	6,027	6,032	6,029	6,028	6,027	6,026	6,027
Civilian labor force	4,010	4,068	4,052	4,034	4,073	4,066	4,083	4,126	4,073
Employed	3,822	3,848	3,843	3,834	3,879	3,872	3,870	3,901	3,851
Unemployed	188	220	209	200	194	194	213	225	222
Unemployment rate	4.7	5.4	5.2	5.0	4.8	4.8	5.2	5.5	5.5
New York									
Civilian noninstitutional population	13,808	13,799	13,801	13,808	13,802	13,801	13,801	13,799	13,801
Civilian labor force	8,749	8,623	8,569	8,738	8,686	8,586	8,751	8,632	8,546
Employed	8,307	8,161	8,117	8,278	8,222	8,155	8,267	8,151	8,086
Unemployed	442	462	452	460	464	431	484	481	460
Unemployment rate	5.1	5.4	5.3	5.3	5.3	5.0	5.5	5.6	5.4
North Carolina									
Civilian noninstitutional population	4,961	5,016	5,022	4,961	5,002	5,008	5,012	5,016	5,022
Civilian labor force	3,377	3,380	3,384	3,373	3,410	3,370	3,407	3,367	3,375
Employed	3,281	3,232	3,212	3,275	3,252	3,247	3,280	3,212	3,202
Unemployed	96	148	172	98	158	123	127	155	173
Unemployment rate	2.8	4.4	5.1	2.9	4.6	3.6	3.7	4.6	5.1
Ohio									
Civilian noninstitutional population	8,271	8,291	8,295	8,271	8,288	8,288	8,290	8,291	8,295
Civilian labor force	5,434	5,493	5,463	5,415	5,411	5,446	5,450	5,470	5,442
Employed	5,113	5,187	5,176	5,081	5,104	5,174	5,166	5,145	5,145
Unemployed	321	306	287	334	307	272	284	325	297
Unemployment rate	5.9	5.6	5.3	6.2	5.7	5.0	5.2	5.9	5.5

See footnotes at end of table

Table A-13. Employment status of the civilian population for eleven large States—Continued

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Nov. 1989	Oct. 1990	Nov. 1990	Nov. 1989	July 1990	Aug. 1990	Sept. 1990	Oct. 1990	Nov. 1990
Pennsylvania									
Civilian noninstitutional population	9,376	9,385	9,388	9,376	9,380	9,382	9,383	9,385	9,388
Civilian labor force	5,901	5,897	5,911	5,910	5,869	5,777	5,850	5,897	5,929
Employed	5,600	5,551	5,564	5,598	5,574	5,496	5,531	5,535	5,571
Unemployed	301	346	347	312	295	281	319	362	358
Unemployment rate	5.1	5.9	5.9	5.3	5.0	4.9	5.5	6.1	6.0
Texas									
Civilian noninstitutional population	12,276	12,416	12,432	12,276	12,379	12,391	12,404	12,416	12,432
Civilian labor force	8,515	8,406	8,524	8,450	8,371	8,325	8,484	8,398	8,470
Employed	7,927	7,961	7,941	7,854	7,853	7,833	7,953	7,916	7,878
Unemployed	588	445	583	596	518	492	531	482	592
Unemployment rate	6.9	5.3	6.8	7.1	6.2	5.9	6.3	5.7	7.0

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[1] These are the official Bureau of Labor Statistics estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

Table B-1. Employees on nonfarm payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Nov. 1989	Sept. 1990	Oct. 1990p/	Nov. 1990p/	Nov. 1989	July 1990	Aug. 1990	Sept. 1990	Oct. 1990p/	Nov. 1990p/
Total	110,168	110,910	111,171	111,104	109,245	110,740	110,613	110,612	110,434	110,167
Total private	91,893	92,879	92,602	92,378	91,344	92,380	92,320	92,306	92,100	91,830
Goods-producing industries	25,512	25,339	25,126	24,753	25,280	25,105	25,013	24,931	24,779	24,524
Mining	723	746	745	749	716	745	735	736	735	742
Oil and gas extraction	398.4	413.3	416.2	423.1	394	413	410	410	413	419
Construction	5,398	5,443	5,340	5,169	5,258	5,229	5,194	5,176	5,095	5,033
General building contractors	1,369.5	1,334.6	1,325.0	1,283.7	1,339	1,319	1,307	1,306	1,279	1,256
Manufacturing	19,391	19,148	19,041	18,835	19,306	19,131	19,084	19,019	18,949	18,749
Production workers	13,221	13,031	12,942	12,771	13,144	13,010	12,963	12,899	12,849	12,691
Durable goods	11,364	11,109	11,059	10,917	11,314	11,179	11,129	11,068	11,027	10,868
Production workers	7,563	7,381	7,347	7,227	7,519	7,438	7,395	7,337	7,313	7,182
Lumber and wood products	752.5	749.9	736.3	716.5	732	742	739	737	730	716
Furniture and fixtures	526.1	511.1	511.1	503.5	521	511	513	510	508	498
Stone, clay, and glass products	571.8	558.3	553.0	545.4	567	552	551	547	546	541
Primary metal industries	760.4	753.2	750.7	745.8	760	759	755	751	751	746
Blast furnaces and basic steel products	270.8	278.4	269.3	269.9	272	271	271	270	271	272
Fabricated metal products	1,437.6	1,415.9	1,412.0	1,397.5	1,429	1,419	1,419	1,410	1,405	1,389
Industrial machinery and equipment	2,128.6	2,075.8	2,073.9	2,063.3	2,129	2,104	2,096	2,082	2,080	2,063
Electronic and other electrical equipment	1,743.4	1,679.2	1,674.5	1,664.9	1,732	1,695	1,683	1,674	1,666	1,653
Transportation equipment	2,035.6	1,985.2	1,969.0	1,909.5	2,023	2,013	1,997	1,981	1,969	1,900
Motor vehicles and equipment	833.1	813.3	805.9	755.4	826	824	816	806	803	749
Instruments and related products	1,019.6	989.7	987.0	984.2	1,018	996	990	991	988	983
Miscellaneous manufacturing	390.1	390.6	391.8	386.1	383	386	384	385	384	379
Nondurable goods	8,027	8,039	7,982	7,918	7,992	7,952	7,955	7,951	7,922	7,881
Production workers	5,658	5,650	5,595	5,544	5,625	5,572	5,573	5,562	5,536	5,509
Food and kindred products	1,664.4	1,733.4	1,696.6	1,660.1	1,651	1,645	1,650	1,652	1,650	1,644
Tobacco products	49.4	49.0	48.6	47.6	48	46	48	47	46	46
Textile mill products	720.4	700.0	689.7	685.2	718	702	701	697	687	683
Apparel and other textile products	1,071.8	1,031.5	1,029.1	1,020.0	1,064	1,027	1,026	1,027	1,022	1,012
Paper and allied products	697.5	701.0	698.7	699.0	697	701	702	700	698	698
Printing and publishing	1,576.5	1,572.9	1,574.8	1,579.6	1,571	1,583	1,582	1,581	1,578	1,573
Chemicals and allied products	1,076.3	1,089.3	1,085.4	1,086.8	1,077	1,088	1,086	1,088	1,088	1,088
Petroleum and coal products	158.4	162.9	162.8	162.4	158	160	161	161	161	162
Rubber and misc. plastics products	877.9	872.5	871.8	856.7	875	874	87[illegible]	873	869	854
Leather and leather products	134.7	126.2	124.5	122.4	133	126	123	125	123	121
Service-producing industries	84,656	85,571	86,045	86,351	83,965	85,635	85,600	85,681	85,655	85,643
Transportation and public utilities	5,735	5,916	5,925	5,914	5,693	5,841	5,846	5,870	5,874	5,870
Transportation	3,566	3,696	3,707	3,701	3,523	3,625	3,631	3,652	3,656	3,657
Communications and public utilities	2,169	2,220	2,218	2,213	2,170	2,216	2,215	2,218	2,218	2,213
Wholesale trade	6,344	6,382	6,368	6,348	6,335	6,374	6,376	6,370	6,350	6,338
Durable goods	3,760	3,759	3,750	3,743	3,760	3,775	3,770	3,763	3,750	3,743
Nondurable goods	2,584	2,623	2,618	2,605	2,575	2,599	2,606	2,607	2,600	2,595
Retail trade	20,031	19,884	19,887	20,035	19,716	19,851	19,866	19,864	19,787	19,719
General merchandise stores	2,712.1	2,436.7	2,472.5	2,588.4	2,542	2,494	2,493	2,486	2,465	2,426
Food stores	3,279.4	3,297.0	3,313.2	3,350.8	3,240	3,304	3,301	3,304	3,307	3,311
Automotive dealers and service stations	2,112.2	2,154.5	2,139.1	2,122.7	2,116	2,131	2,135	2,140	2,131	2,127
Eating and drinking places	6,463.6	6,768.5	6,619.4	6,592.9	6,511	6,619	6,613	6,623	6,633	6,639
Finance, insurance, and real estate	6,752	6,861	6,828	6,814	6,774	6,842	6,852	6,851	6,847	6,836
Finance	3,320	3,342	3,333	3,334	3,327	3,341	3,349	3,349	3,346	3,341
Insurance	2,110	2,146	2,148	2,149	2,114	2,147	2,151	2,152	2,134	2,153
Real estate	1,322	1,373	1,347	1,331	1,333	1,354	1,352	1,350	1,347	1,342
Services	27,519	28,497	28,540	28,514	27,548	28,287	28,387	28,440	28,463	28,543
Business services	5,023.8	5,132.2	5,128.9	5,076.2	4,990	5,051	5,052	5,071	5,060	5,041
Health services	7,738.7	8,237.2	8,285.1	8,351.5	7,745	8,132	8,191	8,237	8,293	8,352
Government	18,275	18,031	18,569	18,726	17,901	18,440	18,293	18,306	18,334	18,337
Federal	2,970	2,987	2,971	2,958	2,982	3,164	3,045	2,999	2,989	2,970
State	4,332	4,244	4,410	4,438	4,212	4,298	4,305	4,309	4,311	4,313
Local	10,973	10,800	11,188	11,330	10,707	10,978	10,943	10,998	11,034	11,054

p/ = preliminary.

Note on temporary census workers

The number of temporary workers associated with the 1990 census has an impact on the employment levels for the Federal government, as well as for higher aggregates. The estimate of these workers was 22,000 in January, 27,000 in February, 117,000 in March, 176,000 in April, 378,000 in May, 367,000 in June, 194,000 in July, 66,000 in August, 26,000 in September, and 23,000 in October. For November, the estimated number (preliminary) was 12,000.

Table B-2. Average weekly hours of production or nonsupervisory workers1/ on private nonfarm payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Nov. 1989	Sept. 1990	Oct. 1990p/	Nov. 1990p/	Nov. 1989	July 1990	Aug. 1990	Sept. 1990	Oct. 1990p/	Nov. 1990p/
Total private	34.5	34.8	34.4	34.3	34.5	34.5	34.5	34.7	34.2	34.4
Mining	43.8	45.1	44.5	44.8	43.7	43.7	43.9	44.7	43.9	43.9
Construction	38.0	39.0	38.0	38.3	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	41.1	41.3	40.9	40.8	40.7	40.9	41.0	41.0	40.7	40.5
Overtime hours	3.9	4.1	3.8	3.8	3.7	3.7	3.8	3.7	3.6	3.5
Durable goods	41.5	41.8	41.4	41.3	41.2	41.3	41.5	41.7	41.3	40.9
Overtime hours	3.9	4.1	3.8	3.7	3.7	3.8	3.9	3.8	3.6	3.5
Lumber and wood products	40.1	40.9	40.1	39.4	40.2	40.2	40.4	40.7	39.7	39.5
Furniture and fixtures	39.8	39.7	39.2	38.9	39.4	39.6	39.4	39.1	38.6	38.5
Stone, clay, and glass products	42.6	42.7	41.9	41.9	42.4	41.7	42.3	42.2	41.2	41.7
Primary metal industries	42.7	43.2	42.7	42.6	42.5	43.1	42.9	43.0	42.8	42.4
Blast furnaces and basic steel products	43.8	43.9	43.6	43.2	43.0	44.1	43.5	43.9	43.9	43.2
Fabricated metal products	41.8	41.8	41.4	41.2	41.3	41.7	41.6	41.6	41.2	40.7
Industrial machinery and equipment	42.4	42.2	42.0	42.1	42.2	42.0	42.1	42.1	42.1	41.9
Electronic and other electrical equipment	41.2	41.2	40.9	41.2	40.8	40.7	40.6	41.1	40.7	40.8
Transportation equipment	41.3	42.9	42.5	41.3	41.0	42.8	42.6	42.8	42.5	41.0
Motor vehicles and equipment	42.9	44.0	43.4	40.4	42.3	43.6	43.7	43.5	43.0	39.8
Instruments and related products	41.4	41.3	41.0	41.4	41.0	41.2	41.3	41.3	41.0	41.0
Miscellaneous manufacturing	40.2	39.9	40.2	40.6	39.7	39.5	39.9	39.9	39.8	40.0
Nondurable goods	40.4	40.6	40.2	40.2	40.1	40.1	40.2	40.2	40.0	39.9
Overtime hours	3.8	4.1	3.8	3.8	3.6	3.6	3.7	3.6	3.6	3.6
Food and kindred products	41.2	41.9	40.9	40.8	40.8	40.5	41.0	41.2	40.5	40.4
Tobacco products	39.0	40.9	40.9	40.7	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	40.8	40.5	40.1	40.0	40.4	40.2	40.0	40.0	39.8	39.6
Apparel and other textile products	37.1	36.7	36.6	36.7	36.8	36.6	36.6	36.6	36.4	36.4
Paper and allied products	43.7	43.7	43.7	43.8	43.4	43.5	43.5	43.2	43.6	43.5
Printing and publishing	38.2	38.5	38.1	38.0	37.9	38.0	38.2	38.0	38.0	37.7
Chemicals and allied products	42.7	42.7	42.6	42.9	42.4	42.4	42.3	42.7	42.7	42.6
Petroleum and coal products	44.8	45.3	43.7	44.1	(2)	(2)	(2)	(2)	(2)	(2)
Rubber and misc. plastics products	41.3	41.6	41.2	41.2	41.1	41.5	41.3	41.6	41.0	41.0
Leather and leather products	37.5	37.5	37.1	36.6	37.6	37.4	37.7	37.5	36.9	36.7
Transportation and public utilities	38.7	39.2	38.7	38.8	38.6	39.0	38.9	39.1	38.5	38.[illegible]
Wholesale trade	38.1	38.3	38.1	38.1	38.1	38.1	38.1	38.2	37.9	38.[illegible]
Retail trade	28.6	28.9	28.4	28.4	28.8	28.9	28.7	28.9	28.4	28.7
Finance, insurance, and real estate	35.6	36.1	35.6	35.6	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.5	32.7	32.4	32.4	32.6	32.6	32.5	32.8	32.3	32.5

1/ Data relate to production workers in mining and manufacturing; construction workers in construction; and nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonfarm payrolls.

2/ These series are not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary.

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers1/ on private nonfarm payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Nov. 1989	Sept. 1990	Oct. 1990p/	Nov. 1990p/	Nov. 1989	Sept. 1990	Oct. 1990p/	Nov. 1990p/
Total private	$9.81	$10.16	$10.15	$10.16	$338.45	$355.57	$349.16	$348.49
Seasonally adjusted	9.78	10.13	10.12	10.13	337.41	351.51	348.10	348.47
Mining	13.27	13.82	13.72	13.76	581.23	623.28	610.54	605.44
Construction	13.69	13.92	13.90	13.79	520.22	542.88	528.20	528.16
Manufacturing	10.59	10.94	10.95	10.97	435.25	451.82	447.86	447.58
Durable goods	11.11	11.49	11.49	11.45	461.07	488.28	475.69	472.89
Lumber and wood products	8.96	9.22	9.13	9.10	359.30	377.10	366.11	358.54
Furniture and fixtures	8.41	8.66	8.62	8.64	334.72	343.01	337.90	336.10
Stone, clay, and glass products	10.95	11.27	11.22	11.28	466.47	481.23	470.12	472.63
Primary metal industries	12.57	13.06	13.05	13.10	536.74	563.33	557.24	558.06
Blast furnaces and basic steel products	14.50	14.98	15.03	15.07	623.50	657.62	655.31	651.02
Fabricated metal products	10.65	10.95	10.94	10.91	445.17	457.71	452.[illegible]	449.49
Industrial machinery and equipment	11.53	11.96	11.90	11.94	488.87	503.87	499.80	502.67
Electronic and other electrical equipment	10.11	10.42	10.47	10.52	416.53	429.30	428.22	433.42
Transportation equipment	13.83	14.31	14.40	14.16	571.18	613.90	612.00	584.81
Motor vehicles and equipment	14.43	14.86	15.01	14.57	619.05	653.84	651.43	588.63
Instruments and related products	10.99	11.47	11.47	11.48	454.99	473.71	470.27	475.27
Miscellaneous manufacturing	8.47	8.63	8.62	8.64	340.49	344.34	346.52	350.78
Nondurable goods	9.87	10.20	10.22	10.32	398.75	414.12	410.84	414.86
Food and kindred products	9.43	9.57	9.57	9.76	388.52	400.98	391.41	398.21
Tobacco products	15.01	16.12	16.03	16.74	585.39	659.31	655.63	681.32
Textile mill products	7.80	8.09	8.11	8.13	318.24	327.65	325.21	325.20
Apparel and other textile products	6.43	6.70	6.67	6.64	238.55	245.89	244.12	243.69
Paper and allied products	12.10	12.42	12.43	12.56	528.77	542.75	543.19	550.13
Printing and publishing	11.07	11.41	11.36	11.43	422.87	439.29	432.82	434.34
Chemicals and allied products	13.28	13.62	13.74	13.79	567.06	581.57	585.32	591.59
Petroleum and coal products	15.62	16.40	16.35	16.50	699.78	742.92	714.50	727.65
Rubber and misc. plastics products	9.54	9.90	9.91	9.94	394.00	411.84	408.29	409.53
Leather and leather products	6.68	6.97	7.00	7.05	250.50	261.33	259.70	258.03
Transportation and public utilities	12.71	13.07	13.02	13.05	491.88	512.34	503.87	506.34
Wholesale trade	10.56	10.94	10.88	10.95	402.34	419.00	414.53	417.20
Retail trade	6.63	6.85	6.85	6.86	189.62	197.97	194.54	194.82
Finance, insurance, and real estate	9.67	10.12	10.09	10.13	344.25	365.33	359.20	360.63
Services	9.61	9.98	10.00	10.04	312.33	326.35	324.00	325.30

1/ See footnote 1, table B-2.

p = preliminary.

Table B-4. Average hourly earnings of production or nonsupervisory workers1/ on private nonfarm payrolls by industry, seasonally adjusted

Industry	Nov. 1989	July 1990	Aug. 1990	Sept. 1990	Oct. 1990p/	Nov. 1990p/	Percent change from: Oct. 1990-Nov. 1990
Total private:							
Current dollars	$9.78	$10.07	$10.09	$10.13	$10.12	$10.13	0.1
Constant (1982) dollars2/	7.62	7.50	7.54	7.50	7.45	N.A.	(3)
Mining	13.32	13.79	13.73	13.83	13.82	13.82	.0
Construction	13.66	13.76	13.78	13.82	13.80	13.76	-.3
Manufacturing	10.58	10.89	10.90	10.93	10.97	10.96	-.1
Excluding overtime4/	10.12	10.40	10.40	10.44	10.50	10.49	-.1
Transportation and public utilities	12.65	13.02	13.00	13.02	12.98	13.00	.2
Wholesale trade	10.55	10.84	10.84	10.94	10.90	10.94	.4
Retail trade	6.61	6.79	6.82	6.83	6.84	6.85	.1
Finance, insurance, and real estate	9.66	10.08	10.06	10.17	10.10	10.11	.1
Services	9.55	9.92	9.93	9.98	9.97	9.98	.1

1/ See footnote 1, table B-2.

2/ The Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) is used to deflate this series.

3/ Change was -0.7 percent from September 1990 to October 1990, the latest month available.

4/ Derived by assuming that overtime hours are paid at the rate of time and one-half.

N.A. = not available.

p/ = preliminary.

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers1/ on private nonfarm payrolls by industry

(1982=100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Nov. 1989	Sept. 1990	Oct. 1990p/	Nov. 1990p/	Nov. 1989	July 1990	Aug. 1990	Sept. 1990	Oct. 1990p/	Nov. 1990p/
Total private	124.2	126.5	124.6	124.1	123.5	124.8	124.6	125.3	123.1	123.6
Goods-producing industries	113.4	113.8	111.0	109.0	111.6	110.5	110.5	110.3	108.0	107.1
Mining	65.0	69.3	68.3	67.8	63.8	66.9	66.1	67.5	66.4	66.5
Construction	146.6	151.4	143.9	139.6	143.0	138.4	139.8	139.7	132.2	135.9
Manufacturing	109.4	108.5	106.7	105.1	108.0	107.4	107.1	106.8	105.5	103.6
Durable goods	108.8	107.0	105.5	103.3	107.4	107.1	106.5	105.9	104.7	101.9
Lumber and wood products	131.7	133.9	128.6	122.6	132.1	129.7	129.7	130.5	126.0	122.9
Furniture and fixtures	131.0	126.1	124.2	121.2	128.2	125.8	125.7	123.9	121.4	118.3
Stone, clay, and glass products	115.0	112.5	109.2	107.7	113.6	108.2	109.5	105.7	105.6	106.2
Primary metal industries	93.6	93.7	92.3	91.3	93.1	94.3	93.0	92.9	92.6	90.8
Blast furnaces and basic steel products	80.2	81.7	80.4	80.2	81.0	82.3	80.8	81.6	82.0	81.0
Fabricated metal products	110.4	108.5	107.3	105.6	108.3	108.5	108.1	107.6	106.0	103.4
Industrial machinery and equipment	100.3	96.9	96.3	96.2	99.8	98.5	98.1	96.8	96.9	95.6
Electronic and other electrical equipment	112.8	108.2	107.1	107.3	110.8	108.3	107.2	107.6	106.2	105.5
Transportation equipment	120.3	121.9	119.9	111.5	118.6	124.1	122.2	121.3	119.8	109.8
Motor vehicles and equipment	132.6	132.1	129.3	110.9	128.6	133.2	131.2	129.1	127.5	108.2
Instruments and related products	89.5	86.5	85.7	86.2	88.0	86.8	86.5	86.0	85.2	84.8
Miscellaneous manufacturing	108.5	106.9	107.8	106.9	104.6	104.5	104.8	104.8	104.1	103.1
Nondurable goods	110.3	110.7	108.5	107.5	108.8	107.7	108.0	107.9	106.7	106.0
Food and kindred products	111.5	119.7	115.6	110.3	108.8	107.9	109.7	110.4	108.3	107.7
Tobacco products	72.4	74.2	73.4	70.8	68.3	66.6	68.8	68.5	66.1	65.3
Textile mill products	105.3	101.0	98.5	97.6	103.9	100.6	100.1	99.4	97.2	96.3
Apparel and other textile products	98.4	93.0	92.7	92.1	96.8	92.4	92.4	92.3	91.4	90.5
Paper and allied products	111.8	112.2	111.8	112.3	110.5	111.6	111.8	110.8	111.6	111.1
Printing and publishing	128.5	129.0	127.8	128.1	127.2	129.0	129.6	128.3	127.8	126.5
Chemicals and allied products	104.9	104.4	103.6	104.8	104.8	104.3	103.2	104.1	104.3	104.6
Petroleum and coal products	88.3	92.1	88.7	89.5	88.4	88.3	88.0	89.9	86.2	88.7
Rubber and misc. plastics products	127.7	127.4	126.3	123.8	126.4	127.2	126.8	126.7	125.1	122.9
Leather and leather products	64.5	59.6	58.1	56.1	64.1	59.8	59.6	58.8	56.7	55.3
Service-producing industries	129.0	132.2	130.7	130.9	128.8	131.2	130.9	132.0	129.9	130.8
Transportation and public utilities	113.2	117.8	116.6	116.9	111.8	115.8	115.2	116.4	114.8	115.5
Wholesale trade	119.0	120.5	119.5	118.9	119.0	119.5	119.5	119.6	118.5	118.8
Retail trade	125.1	125.1	122.7	124.0	123.8	125.1	124.1	124.9	122.4	123.1
Finance, insurance, and real estate	120.5	123.9	121.4	121.1	121.1	123.1	122.9	124.1	121.5	121.9
Services	141.9	147.5	146.5	146.4	142.4	145.9	146.0	147.7	145.6	146.8

1/ See footnote 1, table B-2.

p = preliminary

Table B-6. Diffusion indexes of employment change, seasonally adjusted

(Percent)

Time span	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.
	Private nonfarm payrolls, 356 industries1/											
Over 1-month span:												
1989	64.5	58.7	58.0	57.0	55.6	57.3	55.8	57.7	58.0	55.2	59.6	56.6
1990	55.6	58.6	53.7	49.9	55.8	49.9	50.8	48.2	45.8	p/41.7	p/40.2	
Over 3-month span:												
1989	63.3	64.2	60.0	60.1	59.7	58.3	59.7	54.5	55.2	55.8	57.7	60.3
1990	58.4	56.7	54.8	53.1	53.7	53.3	50.1	45.2	p/40.6	p/36.5		
Over 6-month span:												
1989	67.6	65.4	65.0	61.0	61.2	58.7	57.0	58.1	54.2	58.3	57.4	58.4
1990	57.3	56.5	55.5	55.9	51.4	48.3	p/45.6	p/38.8				
Over 12-month span:												
1989	67.1	67.7	65.3	64.6	64.9	61.2	60.0	59.8	58.6	57.3	56.7	56.0
1990	54.8	54.1	54.1	p/51.0	p/46.8							
	Manufacturing payrolls, 139 industries1/											
Over 1-month span:												
1989	60.4	48.6	50.4	47.1	45.3	45.7	45.0	45.7	34.2	48.6	43.5	48.2
1990	42.4	45.7	45.3	46.8	45.7	40.3	48.2	40.6	38.1	p/36.3	p/27.7	
Over 3-month span:												
1989	54.0	54.7	45.3	43.9	43.2	42.8	41.7	33.1	36.3	34.9	41.7	39.2
1990	40.3	37.1	44.2	41.4	40.6	44.2	39.9	33.8	p/29.1	p/22.3		
Over 6-month span:												
1989	56.5	49.6	49.3	43.5	42.1	37.1	36.7	34.9	34.2	35.3	33.1	36.0
1990	37.1	35.6	36.3	43.2	38.1	31.7	p/28.8	p/20.5				
Over 12-month span:												
1989	53.6	55.0	49.3	45.3	43.9	39.9	37.1	35.6	33.8	32.4	30.9	31.7
1990	31.3	31.3	30.6	p/28.1	p/23.4							

1/ Based on seasonally adjusted data for 1-, 3-, and 6-month spans and unadjusted data for the 12-month span. Data are centered within the span.

p/ = preliminary.

NOTE: Figures are the percent of industries with employment increasing plus one-half of the industries with unchanged employment, where 50 percent indicates an equal balance between industries with increasing and decreasing employment.

Representative HAMILTON. OK. Are we in a recession? [Laughter.]

Mrs. NORWOOD. I thought you'd ask that.

Let me say that the labor market data really show a dismal picture, and the labor market is really acting as though it is in recession. We've had steep job cuts, reduced hours, an increase in job losers. One doesn't determine a recession entirely on the basis of labor market data, however; you need to look at the whole set of economic indicators.

When you look at the leading economic indicators, the coincident indicators, and lagging indicators, they're all down.

If you look at the housing market—housing permits, housing starts, housing completions are down.

Auto sales, domestic and imported, are down.

You look at industrial production; it's down.

You look at durable orders; they're up some. But they were down in the previous month and September. These are, of course, all data for October. We have the first set of data for November.

Retail sales have been flat. Capacity utilization is down. Personal income is flat. Real disposable income is down. But, the GNP data still show for the third quarter a 1.7-percent increase.

The data that we have released this morning are input into many of those indicators and certainly provide a large part of the data that goes into both the industrial production data and to the national accounts.

I would expect them to have considerable downward pull on the GNP numbers for the fourth quarter.

Representative HAMILTON. Do we have here the kind of cumulative unwinding of the economy that characterizes a recession?

Mrs. NORWOOD. We are certainly beginning to see signs of that. I would feel, however, that we need to have declines registered in production and in GNP for the technical definitions of "recession," but it is clear to me that all of the surrounding data that are available present an extremely pessimistic view of the economy.

Representative HAMILTON. Total payroll employment now has fallen for 5 straight months.

Have we ever had a prolonged employment decline like that without having a recession?

Mr. PLEWES. We had a short period in early 1986 where there was a decline, particularly in manufacturing, that was not accompanied by a decline in services.

That situation improved after a short period of about 4 months. But, generally speaking, you're right, there haven't been these periods unless there's been a recession.

Representative HAMILTON. Is the decline in employment concentrated in a few sectors, or is it across the board?

Mrs. NORWOOD. For the last year or so, of course, we've had a concentration in manufacturing and in construction. And we're certainly seeing that in the real estate markets. It has begun over the last several months, particularly last month and this month, to move further into service-producing sectors.

And, as I indicated, except for a few thousand jobs in oil and gas extraction, we are really left with only the health services industry increasing in employment.

And I'm concerned about that.

Representative HAMILTON. Do you have any information about the number of unemployed people who qualify for unemployment benefits?

Mrs. NORWOOD. Yes. Approximately, a third qualify for unemployment benefits.

Representative HAMILTON. Is that roughly what it's been in the past, that one-third of the people unemployed qualify for unemployment benefits?

Mrs. NORWOOD. It is what it has been over the past decade or so. But, if you go back to the seventies, it was probably twice that amount.

Representative HAMILTON. Is that roughly what it has been in the last two decades or so in the percent of the unemployed who qualify for unemployment insurance benefits?

Mrs. NORWOOD. That's correct. Part of that, I think, is because of the tightening in administration of unemployment insurance benefits and eligibility that has occurred in almost all of the States, for a variety of reasons.

And part of it is because of the expanding service-producing sector and the expanding number of jobs to which people move in and out, particularly some of the part-time jobs and otherwise; so that the workers often don't have the the sustained period of employment with one employer to qualify for unemployment insurance benefits.

We've done a supplement to the current population survey to ask unemployed workers if they have applied for unemployment insurance benefits and, if not, why not.

And we expect to have some information, perhaps by next month's hearing.

Representative HAMILTON. Can you tell whether there's genuine hardship or are a number of these people who are unemployed in families who have other sources of income?

Is there any way to separate that out?

Mrs. NORWOOD. We do have data which show that there are a significant number of families, two-earner families, where one earner may still be employed.

We do have 5-plus million female-headed households where there is generally no one else in the work force.

Mr. Plewes has written down a figure of 83 percent. Perhaps he can tell you what it is. [Laughter.]

Representative HAMILTON. It's a good, solid figure, no matter what it stands for. [Laughter.]

Mr. PLEWES. In the third quarter of this year, 83 percent of married couple families that had an unemployed member also had another person who was employed.

So that gives you an indication.

Mrs. NORWOOD. I would like to point out that that's an important figure. It's also very important for us to remember that analyses have shown, that over time, in the case of wives, those who suffer periods of unemployment often have husbands who also suffer periods of unemployment. There seems to be a linkage there that I think is terribly important.

The second point is that, as you know, we have had a period of time over the past couple of decades where many of our young families have developed lifestyles that are based upon two-earner incomes. The houses they buy, the cars they buy, the credit that they assume, depend on two earners.

And so, when one of them is unemployed, there is a financial difficulty in the family. It is not the same thing as a family of very low income, where it takes two people's incomes just to feed the children. It is a hardship of a different kind.

Representative **HAMILTON**. Much of the decline in employment in manufacturing was due to layoffs in the automobile industry. Is that correct?

Mrs. **NORWOOD**. A good section of it, certainly. But, not all of it by any means.

Representative **HAMILTON**. Are the automobile workers—yes, here it is:

"The automobile industry is particularly hard hit with 55,000 workers temporarily laid off."

Mrs. **NORWOOD**. And then some of the feeder industries into the automobile industries have temporarily laid off people.

Representative **HAMILTON**. Are those folks going to be called back soon?

Mrs. **NORWOOD**. The expectation is that many of them will be. But, I do think we need to recognize that the purchasers of automobiles are changing. There are fewer of them. The composition of the population has changed and there is a worldwide problem with the supply of automobiles.

Representative **HAMILTON**. Too many automobiles?

Mrs. **NORWOOD**. Yes. And I think our automobile companies are all trying to figure out exactly how to cope with that. Many of them focus their attention on the share of the market. But I think we're going to be seeing in coming years more of a focus on how they can sell what they produce.

Representative **HAMILTON**. When people are called up to the military service and go to the Persian Gulf and leave their civilian jobs, how are they counted in the statistics? Are they unemployed?

Mrs. **NORWOOD**. No. And I think I'll let Mr. Plewes answer that because he has a great deal of military experience. He's a general in the Reserves.

Representative **HAMILTON**. OK, General, you can answer. [Laughter.]

Mr. **PLEWES**. I'm still here. The way these people are counted depends on their previous employment and whether or not the company has continued to extend benefits to them.

The clearest case is a person who is called up and leaves his other job and is not replaced by another worker—in which case, the employment count goes down.

We think that that's a very small portion of this activity.

There are indications that in some cases employers are continuing to keep these people on their payrolls, either for payments of benefits or for payments of the differential between what the Army or Air Force or Navy is paying them and what they earned before, in which case, they'll be continued on the payroll, and reported to us in the employment count.

There are other cases in which persons were called up either from homemaking or other activities in which they were not on a payroll. And there would be no effect whatsoever.

The bottom line is we haven't had any way of disentangling all these various statuses.

We do not believe, however, that very much of the employment decline as registered this month, or even over the last couple of months, is attributable to the callup of persons for the Persian Gulf.

Representative **Hamilton**. Congressman Upton.

Representative **Upton**. Thank you.

Mrs. Norwood, how do the new employment statistics put forward today compare to other industrialized nations, particularly in Europe, as well as countries such as Japan? Where do we stand to the rest of the world, both in terms of the trend and actual numbers?

Mrs. **Norwood**. We have, of course, had an unprecedented period of expansion. Our numbers are clearly higher than Japan and Germany and Sweden, the Scandinavian countries; they are lower than Canada, Australia, France, Italy, and the United Kingdom.

Representaive **Upton**. When you say Germany, is that the old West Germany or the unified Germany?

Mrs. **Norwood**. West Germany. We do not as yet have numbers for a combined Germany. As you probably know, the Bureau of Labor Statistics has technical assistance work going on with several of the countries of Eastern Europe, in particular with Poland and with Hungary.

I have visited the Soviet Union and we're looking at the possibility of working with Czechoslavakia. We are coordinating all of that work with the European Community's Statistical Office, which is trying to coordinate this around the world.

But, there is a great deal of work that needs to be done in determining how to measure the change that is occurring in all of the countries of Eastern Europe and, of course, in that part of Germany that was East Germany.

Representative **Upton**. I note that the Michigan unemployment rate has been doing some ups and downs over the last couple of months.

How would you read the November increase to 7.7 percent? Obviously, a major part of that would be the auto industry and the auto parts.

I'd be interested in any specific evaluation.

Mrs. **Norwood**. As you well know, the automobile industry and some of the allied industries surrounding the automobile industry are a very important part of the economy in the State of Michigan. And we're seeing exactly what we would expect, which is a big increase in the unemployment rate for workers in the automobile industry. Close to 14 percent.

Many of the workers in that State and some others are being very much affected by what it seems to me is the decision that many automobile manufacturers are making, which is that they're going to look at their markets, and adjust their production schedules to what they think the next couple of months are going to show.

So what we're seeing is a ratcheting effect of the shutdown, the layoff for a few weeks, and then hiring people back.

The workers, therefore, are really being pushed in many ways by having several weeks of layoff. It also, of course, affects the unemployment insurance system.

Representative UPTON. Thank you.

Representative HAMILTON. The mass layoff program has been canceled hasn't it? You announced that earlier this year.

Mrs. NORWOOD. Yes. But, in the 1991 budget for the Bureau of Labor Statistics, the Appropriations Committees and the Congress passed an appropriation which includes it.

Representative HAMILTON. So there's been no cancellation of it then?

Mrs. NORWOOD. That's correct.

Representative HAMILTON. That's good.

Mrs. NORWOOD. I should point out, however——

Representative HAMILTON. It has gone on just as if it has not been interrupted?

Mrs. NORWOOD. Well, yes. I guess that's true. Of course, the States knew that the program was in some jeopardy, and so there was a little period when it didn't move as fast foward as fast as we would have liked.

But I think it is now back on track.

I should point out, of course, that, although that was restored and several other additions were made to the Bureau of Labor Statistics budget, there were also some severe cuts in the BLS budget. And we're still trying to figure out how to take them.

We've had to absorb all of the pay raise. And we had a 2.41 percent cut across the board. That's about $10 million that we have to find in fiscal 1991.

Representative HAMILTON. Let me ask a few questions about your data on employment and unemployment in rural areas.

I hear the comment from time to time that the unemployment data underreport rural unemployment.

Could you comment on that for me?

Mrs. NORWOOD. I believe that's probably true. And I think the reason for that is that the official definition of "unemployment" requires that people have not only not worked but have been looking for work during the preceding 4 weeks.

In many rural areas, in the farm areas, in particular, they're not going to look for work in the middle of the winter on a farm.

Now, they may, and many of them are, going off to the nearby towns and finding jobs there.

But, it seems to me, and I discussed this with Congressman Obey on several occasions, it may be that, at some point, we ought to think about some kind of a special study based on a survey of how you really should be looking at these rural areas.

Represenative HAMILTON. Do you have any plans to expand your data collection to improve the quality of statistics on rural areas?

Mrs. NORWOOD. No, sir.

Representative HAMILTON. Would it be correct to say that rural areas generally suffer more from a recession than urban areas?

Mrs. NORWOOD. No, I don't think that's so. We're seeing a considerable amount of suffering in the automobile industry, which is certainly in industrialized urban areas. Basically, we find that in good times as well as in bad times, there are enormous differences from one part of the country to another.

Representative HAMILTON. Is it correct that during the 1981–82 recession, rural workers were more likely than urban workers to lose their jobs? They were unemployed longer? They suffered larger wage cuts?

Mrs. NORWOOD. There often are larger, more severe effects in plant closings and layoffs; mainly, because there isn't anywhere else available for those people who have lost a job to go find jobs.

The ability of adjust, the flexibility, is not there in rural areas. So, what I was referring to really is the specifics of the data that we now have. But it is certainly true that people in rural areas have much less flexibility, unless they want to move, than do people in urban areas.

Representative HAMILTON. Can you generalize and say that, in recessions, generally, rural areas suffer more than urban areas?

Mrs. NORWOOD. We've seen that, in our mass layoff program, the layoffs seem to be more severe in rural areas.

I think we should be watching that to see where we go.

Perhaps Tom Plewes has something to add to that.

Mr. PLEWES. I think that's correct. We don't see large differentials between the urban areas and the rural areas in terms of the incidence of the unemployment, although with the caveat that unemployment may not be a good measure for the rural areas.

But, when there is an episode of unemployment, it affects rural areas much more deeply and more severely than the urban areas.

Representative HAMILTON. OK.

Senator Sarbanes.

Senator SARBANES. Thank you very much, Mr. Chairman.

Good morning, Commissioner and your colleagues.

This is the highest unemployment rate since when?

Mrs. NORWOOD. October 1987.

Senator SARBANES. October 1987. Was it 5.9 percent then?

Mrs. NORWOOD. Six percent. September 1987 it was 5.9 percent.

Senator SARBANES. Now, as I understand from your statement here, particularly the beginning of the paragraph:

"Most of the increase in joblessness in November occurred among adult men."

Isn't that the last category that you reach in unemployment situations, when you have some degree of concern about where the economy is going?

Mrs. NORWOOD. That's true. We're getting to the point where women are also affected in periods of downturn.

But what we're seeing with the women is that their labor force participation is going down some, so they're not there. Or, they're not coming in as they were before.

The men are losing their jobs. The women are, too. Their rates have gone up. But, yes, traditionally, it is the adult men unemployment rate which goes way up in a period of recession because of the layoffs in heavy industry and manufacturing.

We've been experiencing that for sometime. It's just going on more.

Senator SARBANES. I think that supports the point I'm trying to get at, which is that you have a concern about a rising unemployment rate and what that may mean about where the economy is trending. That's the general rate. If we go then below the general rate, as I've just done, to look at what component of the unemployment rate is worsening, the component that is worsening, as you put it in this report, is the component which at least on a historical basis would most likely indicate a trend, an economic trend that ought to be of concern to us.

Mrs. NORWOOD. Absolutely.

Senator SARBANES. Do you have any regional data on the distribution of this unemployment situation?

Mrs. NORWOOD. We had declines in employment in most regions except the West, which is increasing very slightly. In terms of unemployment levels, the Midwest has been down a bit. The others are up except for the East-North-Central.

In terms of the rates, again, the Midwest and the East-North-Central are less affected than the others by increases.

Senator SARBANES. Would you say that this trend in unemployment represents a move into a recessionary situation in the economy?

Mrs. NORWOOD. It's very clear to me that this set of data shows the labor market in tremendous difficulty. And it's not just this month, but last month we were showing the same thing.

As I indicated earlier, if you review all of the other data that we have, most of them, of course, are for the month of October, in just about all cases they're down. In one or two cases, like retail sales, they're flat.

The GNP numbers for the third quarter are still positive, but there will be a revision of that in a week or so and I don't know what it will be. It's quite clear that the data we've released today and the data that we have been releasing for this quarter are going to have a very strong downward pull on things like the industrial production index and on the GNP.

And I think we're in trouble.

Senator SARBANES. You probably answered this before I got here but, in these monthly figures, was the labor force participation normal? I mean, did we have normal labor force participation? If we didn't, what would the unemployment rate have been?

Mrs. NORWOOD. Over the year, the labor force participation rate for the civilian population is down about six-tenths of a point. The labor force participation rate for women is down more than that. We've have had a tremendous decline of 800,000 teenagers in the labor force over the past year, and as a result, I think there has been much less upward pressure on the unemployment rate than we would have seen.

Teenagers generally have a very high unemployment rate compared to the rest of the population.

Senator SARBANES. Now, that's not a decline because of demographics, is it? It's that they've dropped out of the market?

Mrs. NORWOOD. It's partly demographics. It's partly a reduction in their participation rates, I believe, because there are fewer jobs. There's no longer an expansion in some of the industries that teenagers tend to work in.

But we are seeing a clear decline in labor force participation, as you would expect, given the rest of these data. As to how that would transfer into unemployment, I'm reluctant to give you a figure. You can estimate that for every 100,000 or so people we have about a tenth of a percent unemployment. But it's more complicated than that because of the changing composition of the labor force. If you were to standardize—and I'm not suggesting you should, because I'm not always sure that's a good way to look at it—but if you were to hold the labor force composition constant and apply current unemployment rates for teenagers, blacks, Hispanics, women and men, I think you would have a larger increase in overall unemployment than we currently have.

Now, the danger with doing that kind of analysis, I think, is that sometimes you can wish away problems by saying, well, let's see what would have happened if some group were not here.

But, in this case, because the teenagers generally have unemployment rates in double digits, the fact that there have been fewer of them in the labor force means that the overall unemployment rates are lower than they would be if you just looked at the adult population.

Senator SARBANES. Do you mean the unemployment rate is worse than if you just looked at the adults?

Mrs. NORWOOD. If you're looking at the scenario of what would have happened if participation stayed up.

Senator SARBANES. Here's my point. The way we do our surveys, if you get a worsening economic situation and people, therefore, say, "I'm not even going to look for a job. I'm not going to enter the labor market because there are no jobs out there to be found," although, in the normal situation, they would be looking, the unemployment rate understates what's happening with the economy.

Mrs. NORWOOD. That's right.

Senator SARBANES. Because these people have self-selected themselves out and, therefore, are not counted as unemployed. So, then, if you start trying to look at the labor force participation rates to get some handle on that, I take it what you're telling me is that the labor force participation rates now are below what one might normally expect them to be.

Mrs. NORWOOD. Yes, they are. And if we look at the employment-population ratios, you find that they are down considerably, too. Overall, the EP ratio has gone from 63 percent a year ago to 62.1 percent now.

So, the proportion of the population that has jobs, which is another way of looking at it and, in many ways, a better way, particularly for some of the minority groups that have the hardest time and get discouraged more easily, you see that there has been a considerable decline. The EP ratio for adult men is down almost a full percentage point. The EP ratio for adult women is down more than that. It's down from 55 to 54.5 percent. The EP ratio for teenagers is down about 4 points.

And if you look at the EP ratio for the black population, it's also down actually more than a point.

Senator SARBANES. Is the 5.9 percent unemployment figure with the military or without the military?

Mrs. NORWOOD. That's the civilian population.

Senator **Sarbanes**. What's the figure if you include the military? Lower, I take it?

Mr. **Plewes**. 5.8 percent with just the resident U.S. military. We don't count the overseas military as part of that labor force.

Senator **Sarbanes**. Now, I want to ask about the average hourly earnings, table B-4, way in the back of your news release. And I want to use a chart that we've put together on real average hourly earnings.

Now, this is in constant dollars. As I understand it, in your table—your table is a much shorter timeframe than we have up here—but you don't have a constant dollar figure for this month because it's not yet computated?

Mrs. **Norwood**. That's right.

Senator **Sarbanes**. But, I would take it that, since the nominal figure only went up a penny—that's the line above—that the constant figure will probably be the same as last month, or conceivably somewhat lower? You count inflation against it; is that correct?

Mrs. **Norwood**. I would expect so, yes.

Senator **Sarbanes**. What I'm trying to get at here is there's a concern about not only how many are at work but also how much those who are at work are earning.

Mrs. **Norwood**. Yes.

Senator **Sarbanes**. And you can have an economic slowdown and the resulting pain of such slowdown not only because people don't have jobs, although that's the most serious thing, but also because people who do have jobs are less able to cope because their real earnings are not holding up.

Mrs. **Norwood**. It is clearly true that real earnings, real average hourly earnings, have declined. If you look at it year over year or whether you look at it in terms of monthly change when these earnings are adjusted for inflation.

Senator **Sarbanes**. What factors seem to account for this decline in real earnings? Charted out like that, that's pretty dramatic actually.

Mrs. **Norwood**. Of course, year over year, we had a 6.3-percent increase in the CPI from October to October. So we have rates of inflation going up. And we have had somewhat of a dampening on the rate of increase in wages and in salaries.

I think, on the other side, we have to look at a couple of things. One is that, particularly in collective bargaining situations, lump-sum payments are becoming more usual than before, partly because then it doesn't get to be a part of the basic wage for the next negotiation.

But, those are excluded from the average hourly earnings figures themselves.

The other point, however, is that the cost of fringe benefits to employers seems to be rising much faster than the increase in wages and salaries. And, of course, the average hourly earnings does not take into account the fringe benefit costs and the largest fringe benefit cost is health care. Health insurance costs to employers seem to be going fairly steadily upward if you look at it over a period of some time.

One of the problems is that although it is a benefit to workers to have health insurance, I don't think a worker feels much better off if his employer is paying another $1,000 a year toward his health insurance; he doesn't really see it. He has had health insurance coverage before. He has health insurance coverage now.

To the employer, that's an increase in cost. And it's a large and a worrying increase because it seems to go on and on.

Senator SARBANES. The employee is not getting better health care, it's just costing more money to get the same amount of health care, as a general proposition, isn't it?

Mrs. NORWOOD. He's probably getting a little less health care because many of the insurance policies now are being rewritten to provide for a little bit larger initial payment. Deductibles are changing, and so on.

As to whether he's getting better health care or not, that's another whole area of whether we're doing many, many more things technically to give people better care and keep them alive more, and so on.

I think we're seeing some of the employment increases in the health care industry that are really related to all of this. The expenditures in this country on health care are continuing to rise; whether it's private or publicly financed is a separate question.

Senator SARBANES. I think it's absolutely striking, the percentage of our GNP that we put into health care compared with other industrial countries.

And then you try to compare the substance of what people get in terms of health care. That's more of an ad hoc comparison. There are no strict standards to measure that.

But, in many instances, it doesn't seem to be any better except that we have very high technology. And, in some instances, less good. So that we seem to be putting more resources into health care, significantly more than other societies, but not for the ordinary citizens.

I mean, it would be one thing if you said, well, look how much better the health care coverage and services people are getting compared with countries A, B, and C. That doesn't seem to be the case.

Mrs. NORWOOD. Some people would argue with that, and I'm not really very expert about it. I do know there are a lot of procedures we're doing now. There's a lot more heart surgery, for example. There's some controversy about whether that's better or not better.

But, there are things that are being done using new technology. I also personally believe, and I don't have a lot of evidence for it, but I do think that an important part of the increase in health care expenditures is because of all the litigation that goes on in this country.

And so, as a result, a lot more procedures are undertaken and a lot more is spent in a sense for protection.

Senator SARBANES. A lot of it apparently. I don't have the figures but, apparently, health care costs in the last year of people's lives is an extraordinarily large percentage of their total health care costs.

What other factors account for this decline?

You're saying, in part, this decline in real earnings is overstated because it doesn't reflect fringe benefits?

Mrs. **Norwood**. Yes, I believe that's true.

Senator **Sarbanes**. That hardly explains this. I mean, this is pretty dramatic. You don't quarrel with what this chart shows, just in terms of real average hourly earnings, do you?

Mr. **Dalton**. Those two big peaks, of course, are the oil shocks. And, for some reason, at that time, workers were able to get compensated for that inflation.

Senator **Sarbanes**. I'm less concerned about the peaks than I am about the valleys. Even if you leveled it up, up there, I'm concerned about this drop. Interestingly enough, about 1975 and 1980–81, and then the continued downtrend that's going on more recently, including what's happening now. As you can see, you're going to have to redo the table in order to include the downturn in the next few months.

Mrs. **Norwood**. That's true. I would also point out, as was just pointed out, that the hourly earnings refers really only to production, nonsupervisory workers. So they are concentrated heavily in the goods producing sector, in which we've been losing a lot of jobs; since demand for workers in manufacturing has gone down so much. This is what you would expect.

As you produce jobs in the service-producing sector, many of which are not production or nonsupervisory jobs, you're getting some increases. If you look even at average hourly earnings for production nonsupervisory workers, you find that manufacturing has come down now without correction for inflation to $10.97 with an average for the country in November of $10.16.

Services has gone up to $10.04. It's only in the last several months that wages in services has gone up over $10. I think you're quite right that real earnings are declining. They're declining even when you look at the employment cost index, which includes some of these additional workers who are not covered in the average earnings series. It's not declining as much, but it's still a problem.

But that's what you would expect in these conditions of supply and demand now. That is this latest part of that.

Senator **Sarbanes**. Do you expect these trends to continue in the future, or do you think we can expect some reversal into a pattern of stronger wage growth?

Mrs. **Norwood**. There are several issues that one needs to factor into answering that question, I think.

One is what's going to happen to the rate of inflation. What we're seeing now is that, when we get to 4.5 to 5 percent inflation, people consider that's fairly good. That's quite a lot of inflation, it seems to me.

And we're above that now, largely because of what's happening in the Middle East.

Senator **Sarbanes**. Let me just note on that point for the record that, when you get the perception that there's going to be a peaceful resolution of the Mid-East situation, the price of oil drops quite substantially. In fact, it's gone down 12 to 14 percent in the last couple days on that basis.

And when you get the war scares, it shoots back up again.

So, the notion that an offensive war is going to ease the oil situation doesn't seem to jive with the market's judgment about that, at least in the short run.

But, please, that's a diversion.

Mrs. **Norwood**. The important thing really is that there are two sides to this. One is inflation, and the other is earnings.

Senator **Sarbanes**. But, we used to have inflation of the sort you've been talking about and earnings didn't take the kind of pounding that they've been taking recently.

Mrs. **Norwood**. That's true, but we've also become very noncompetitive. We also were an economy with a much more heavily goods-producing work force than we have now.

And as I've said, I think the hourly earnings data do not include many of the newer kinds of occupations that are emerging.

Senator **Sarbanes**. When you say we became less competitive, do you mean internationally as judged by what? The trade deficit?

Mrs. **Norwood**. Yes.

Senator **Sarbanes**. Why do the big trade deficit figures occur at the same time as these very low real average hourly earnings?

Mrs. **Norwood**. A lot of it is oil, but not all of it.

Senator **Sarbanes**. I don't follow you.

Mrs. **Norwood**. Oil prices go up and that has an effect.

Senator **Sarbanes**. But, oil prices were up there at those peaks, I was just told. Yet, the time period when oil prices were way up when we had the oil shocks, we, in fact, did pretty well on real average hourly earnings.

We had large trade deficits in the 1980's and, in effect, the cumulative impact was to thrust us from being a creditor to being a debtor nation. And that was at a period when we had these very low real average hourly wages.

Mrs. **Norwood**. But, the situation was very different then because there were many larger union and management settlements, and other wage increases that occurred. Obviously, wages were higher then. That's really what you're saying. They were much higher then, in relation to inflation than they are now. That's quite true.

We have really changed, I think, the structure.

Senator **Sarbanes**. When real earnings were much higher, we weren't taking a beating on the trade deficit. Then, they became much lower and we are taking a beating on the trade deficit in that same period.

So, I don't understand how your reference to competitiveness squares with that situation.

Mrs. **Norwood**. We're using our workers in manufacturing apparently a little bit more effectively because their productivity in manufacturing is somewhat up.

And, therefore, our costs should be lower, which should be reflected in prices. And for a while, in the early eighties, were reflected in prices.

Now I think we're seeing something of a turnaround. Manufacturing output has kept up more than have the number of workers.

And we're seeing, for example, that unit labor costs are still declining slightly, not as much as they were before, but output has over a period of time not declined to the same extent that employment has.

That's what I meant about efficiency.

Senator SARBANES. Aren't real average hourly earnings in some other industrial countries outpacing the United States?

Mrs. NORWOOD. In some countries, they are higher. I don't have that in real terms. But, I do have the data through 1989.

Senator SARBANES. For which countries?

Mrs. NORWOOD. A lot of them. The series are not the same as the average hourly earnings we were just discussing. These series attempt to account for the costs of benefits that people get. It's very difficult to do that internationally because many of the benefits that workers get in other countries are financed not by employers but out of tax revenue, such as, obviously, medical care.

But, the United States is lower than Canada and lower than Belgium, Denmark, Finland, Germany, the Netherlands, Norway, Sweden, and Switzerland. It is higher certainly than the Latin American countries, than several of the countries in the Far East and Israel. Even higher than Australia and New Zealand. It is higher than Austria, higher than France, and higher than some of the countries like Greece and Ireland.

Senator SARBANES. How about Japan?

Mrs. NORWOOD. Japan, we calculate as approximately $12.63 versus $14.31 for the United States.

Senator SARBANES. What did you calculate for Germany?

Mrs. NORWOOD. Germany is $17.58.

Senator SARBANES. Well, from that data, one could not really sustain the proposition that, to the extent we can compete or are having difficulty competing internationally, it's because our workers make so much more than workers make in those other countries.

Mrs. NORWOOD. No. I don't think you can state that.

Senator SARBANES. In other words, the Germans are paying their workers more. Yet, if you judge effectiveness by their surpluses, the current account balance and everything else, they are competing much better.

So, the cause has to be found somewhere else than in the worker's pay package.

Mrs. NORWOOD. I would argue that the Germans have been more successful in some ways in handling their fiscal and economic policy. I mean, they've maintained inflation at much lower levels than we have. They don't have the kind of problems that we are facing with our budget, and so on.

So it has been somewhat easier for them. Also, the European Community.

Senator SARBANES. I don't think they have the same disparities in income and wealth in terms of their tax policy as we have.

Mrs. NORWOOD. I think that's probably so. You should also know, however, that they have a very different attitude about young people in the labor market. They have had a good deal more unemployment among young people and have handled it in different ways from the way in which we have.

I haven't looked at those data in the last year or so.

Senator SARBANES. Thank you.

Representative **Hamilton**. Just a couple of other questions.

The groups of workers that have lost jobs—Senator Sarbanes was asking about that a little earlier—women have really experienced a sharp drop, haven't they? Between June and October, the number of people employed fell by 670,000, and women accounted for 87 percent of the job loss.

Mrs. **Norwood**. I don't have the figures exactly but it's quite clear that, yes, women lost 590,000 jobs. Employment was down; put it that way. A hundred and eighteen thousand in October.

Representative **Hamilton**. Why did women have such a disproportionately bad job loss?

Mrs. **Norwood**. Partly because the decline in construction and manufacturing that affected men so much more occurred much earlier. And job declines are expanding into services, so that many of the industries, like retail trade and some of the individual services industries, where so many women are working—even things like the banking industry, which employs a lot of women—have begun losing jobs.

For quite a while, until really the last 3 months or so, those industries were continuing to expand.

Representative **Hamilton**. Now, we expect to see, in this downturn or recession, that blacks, Hispanics, and teenagers would suffer the largest loss, won't we?

Mrs. **Norwood**. Generally, in a period of economic distress, or economic downturn, minority groups suffer. We haven't seen any special evidence of that now. Their unemployment rates are extremely high.

They are generally, however, those who get the jobs last, who often have the least training. And they're usually the first fired.

Representative **Hamilton**. We haven't talked much about the inflation rate. Let's get that on the record here.

How much of the inflation rate—now at almost 9 percent for the past 3 months—increase is due to energy?

Mr. **Dalton**. It's about half.

Representative **Hamilton**. And the other half?

Mr. **Dalton**. Nonenergy components. [Laughter.]

Representative **Hamilton**. Everything.

Mr. **Dalton**. Yes.

Representative **Hamilton**. So we have about a 4.5-percent inflation, roughly, without energy?

Mr. **Dalton**. Well, if we take out food and energy, and I know there's some reservation about doing that, you have a 5.5-percent annual rate through the first 10 months of this year.

Representative **Hamilton**. Are the higher energy prices beginning to push up the prices of other goods and services?

Mrs. **Norwood**. Yes.

Mr. **Dalton**. To some extent. Airline fares, in particular, seem to be rising in response to the fuel costs.

Mrs. **Norwood**. We anticipate that the indirect effects, that is, the effect of energy increases on other products which are priced through the CPI, will probably be about as large as the direct effects of the increased price of energy.

Representative **Hamilton**. So do you see any reason to be concerned about the acceleration of nonenergy prices at this time?

Mrs. **Norwood**. I'm always concerned about any acceleration of the prices. I think our inflationary expectations in this country keep rising. We become a bit complacent about it.

Representative **Hamilton**. So the concern that the Fed has now about not moving to reduce interest rates because of the possibility of inflation accelerating is a genuine concern, a valid concern?

Mrs. **Norwood**. It's always a tradeoff that has to be made, and I don't know how they should make it, but I do believe that they have to take it into account.

Mr. **Dalton**. If you take out energy from the CPI and look at the rate of increase, so far this year, it's 5.5 percent. It was 4.6 percent for all of last year; 4.7 the year before; 4.1 the year before that.

So, clearly, it is an acceleration.

Representative **Hamilton**. So there has been a jump of about a full percentage point?

Mr. **Dalton**. Yes.

Senator **Sarbanes**. Why would a lower interest rate in the current economic circumstances be inflationary?

Mrs. **Norwood**. I didn't say that it would. I merely said that I believe the Fed should look at all of the data, and it certainly does.

Senator **Sarbanes**. I thought the assumption was that, if we have this economic slack, which clearly we have in the labor market and we also have in the industrial production index, that you could lower interest rates and try to stimulate some economic activity without it being reflected in an increase in inflation.

Mrs. **Norwood**. That may well be.

Senator **Sarbanes**. In fact, a lower interest rate in some ways would help to reduce other aspects of inflation.

Mrs. **Norwood**. That may well be.

Representative **Hamilton**. Anything further?

Senator **Sarbanes**. I have one final question.

If you were in charge of a station that posted flags for people who were out boating or sailing, and I take that analogy over now to the economic winds that are at work as we see them through these figures, would you run up at this point the red warning flag?

Mrs. **Norwood**. I believe that we have a set of data for November that are extremely worrying for the labor market. And as I look at the other economic data that are out for the month of October, and I reviewed them before—almost every one of them is down—so I have concerns, yes.

Senator **Sarbanes**. Thank you.

Representative **Hamilton**. Thank you very much, Commissioner Norwood and your colleagues. We were pleased to have you.

The committee stands adjourned.

[Whereupon, at 10:40 a.m., the committee adjourned, subject to the call of the Chair.]

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